Appendix D
Visual Impact Assessment

Appendix D: Visual Impact Assessment

This document is the Visual Impact Assessment report prepared for the Portageville Bridge Project (the Project) in January 2010. This report was prepared in support of the Draft Environmental Impact Statement (DEIS) prepared for the Project in accordance with the New York State Environmental Quality Review Act (SEQRA). It evaluates and illustrates the visual impact of two Build alternatives for the Project—one in which a new bridge is constructed and the existing Portageville Bridge remains in place beside the new bridge, and another in which the new bridge is constructed and the existing bridge is removed.

Since completion of the SEQRA DEIS in November 2012, the Federal Highway Administration (FHWA), in conjunction with the New York State Department of Transportation (NYSDOT), have determined that the Build alternative in which a new bridge is constructed and the existing bridge remains in place is not reasonable, and that alternative has been eliminated from further review. The conclusions in this report related to the remaining Build alternative—the alternative with a new bridge across the Genesee River and removal of the existing bridge—remain valid.

VISUAL IMPACT ASSESSMENT

Portageville Rail Bridge Replacement

Letchworth State Park

Town of Genesee Falls, Wyoming County, New York

Town of Portage, Livingston County, New York

Prepared for:
Modjeski and Masters
4909 Louise Drive, Suite 201
Mechanicsburg, Pennsylvania 17055

Prepared by:
C&S Companies
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Date: January 2010

TABLE OF CONTENTS

FIGURES

APPENDICES

INTRODUCTION

C&S Companies (C&S) was retained by Modjeski and Masters to prepare a Visual Impact Assessment (VIA) for the proposed Portageville Rail Bridge Replacement located in the Letchworth State Park, Livingston and Wyoming Counties, New York. Modjeski and Masters is the bridge design consultant retained by Norfolk Southern, the owner of the bridge. The purpose of this VIA is to: 1) describe the appearance of the visible components of the proposed project, 2) define the visual character of the project study area, 3) inventory and evaluate existing visual resources and viewer groups, 4) evaluate potential project visibility within the study area, 5) identify key views for visual assessment, and 6) assess the visual impacts associated with the proposed project alternatives. This VIA was prepared under the direct guidance of a registered landscape architect experienced in the preparation of visual impact assessments. It is also consistent with the policies, procedures, and guidelines contained in established visual impact assessment methodologies (see References section).

PROJECT DESCRIPTION

Project Site

The proposed project site includes approximately 2 acres of land within Letchworth State Park (See Figure 1, Project Location Map). The site is directly accessible from the Park Road, about 1 mile from the South Entrance to the park. The immediate area is wooded, undeveloped park land. Outside the State Park borders, land use within the area is dominated by active agriculture, with farms and single family rural residences generally occurring along the road frontage. The project site is a deep gorge formed by the Genesee River.

Proposed Project

Norfolk Southern (NS) is proposing to increase the load carrying capacity, remove operational constraints and maintain acceptable levels of safety of the Portageville Bridge. The Portageville Bridge, also known as the High Bridge, is located at milepost 361.66 along the Southern Tier Route. The Southern Tier Route is Norfolk Southern's mainline route between Buffalo and Binghamton, NY. The bridge crosses the Genesee River in Letchworth State Park near the hamlet of Portageville, NY. Within the park, the Genesee River flows from south to north through a deep gorge and over three scenic waterfalls. The bridge is situated near the southern end of the park adjacent to the Upper Falls and is oriented in a general east-west direction. The existing bridge is an 819 feet long steel viaduct carrying a single railroad track, approximately 245 feet above the floor of the gorge. The viaduct spans the gorge on six steel towers constructed in 1875. The superstructure of the viaduct consists of three spans of pin-connected deck trusses and ten spans of deck plate girders built in 1903. The aging Portageville Bridge is a vital yet weak link on the Southern Tier Route. This project will examine the visual impact of alternatives to increase capacity, remove operational constraints and maintain acceptable levels of safety. The alternatives will include No Action, replacement of the existing bridge with a new bridge on

a parallel alignment and removing the existing bridge, and replacing the existing bridge on a parallel alignment without removing the existing bridge. See Figure 2 for a Project Layout Plan.

The proposed bridge is a 485 feet long steel spandrel-braced arch bridge carrying a single railroad track, approximately 245 feet above the floor of the gorge. A 100 foot long approach steel girder span will connect the main span to the west side of the gorge, while two 100 foot long approach steel girder spans will connect the main span to the east side of the gorge. The track will be supported by a ballasted concrete deck trough. See Appendix D for images of bridge design model.

EXISTING VISUAL CHARACTER

The following section describes the visual character of the project study area. Established visual assessment methodology from NYSDEC generally suggests a study area include a 5 mile radius. However, due to the low elevation of the bridge relative to the surrounding landscape and the large amount of vegetation, the initial study area for the project was defined as the area within a 1.5-mile radius of the bridge. This visual study area is illustrated in Figure 3.

Physiographic/Visual Setting

Landform and Vegetation

The visual study area is located along the northern portion of Allegheny Plateau physiographic region. This plateau forms the northern end of the extensive Appalachian Plateaus, which extend to the southwest. Rivers and their tributaries have cut the originally level Appalachian Plateaus into hilly uplands. The branching drainage pattern of north-south stream valleys typical of this region was the result of streams eroding horizontal layers of rock. Some of these north-south stream valleys were broadened and deepened by glacial ice. These forces led to the development of the "Grand Canyon of the East", Letchworth State Park, which is the heart of the project study area. This area is characterized by a steep wooded gorge that drops from an elevation of approximately 900 feet at the rim to approximately 600 feet on the narrow valley floor where the Genesee River occurs.
Vegetation in the study area is a mix of open agricultural fields and deciduous forests. Forest vegetation is primarily deciduous (oaks and northern hardwoods) with some stands of conifers. Vegetation within the park is typically mature with a full canopy. Open areas within the park are picnic and recreation sites of mowed lawn.

Land Use

Land use within the study area is primarily forested parkland, adjacent farms, and scattered rural residences outside the park boundary. Uses within the park boundary are recreational, with facilities for hiking, picnicking, scenic overlooks, and restaurant facilities at the Glen Iris Inn. Somewhat higher density residential and commercial development is concentrated in the nearby hamlet of Portageville, characterized by a small network of streets with traditional residences, with some commercial development, including a bowling alley, pizza shop, restaurant, gas station and the Genesee Falls Inn. The Genesee Falls Town Hall, Genesee Falls Fire Department, and a post office are also located in the hamlet. Two other hotels exist in the study area, the Colonial Motel on NY Route 19a, and at the Glen Iris Inn inside the park. The vast majority of the visual study area surrounding the park is a

rural/agricultural landscape. Two cemeteries are within the study area, on East Koy Road (C.R. 56) and at the corner of Finn and Griffith Roads.

Water Features

The primary water feature within the visual study area is the Genesee River. The river is a major recreational water feature in the larger region, offering fishing, white-water rafting, and kayaking opportunities, though these uses are more limited in the study area due to the proximity of several waterfalls. These waterfalls are, however, key scenic features which attract hikers and photography enthusiasts.

Landscape Types

Within the visual study area, three distinct landscape types were defined and their general landscape character, use, and views to the bridge are described below.

Rural /Agricultural

This landscape type makes up a large portion of the visual study area, and is characterized by open agricultural fields with occasional farms and rural residences located along a variety of state, county, and local roads in the study area. Agricultural fields are primarily engaged in growing corn, hay, pasture grasses, bordered by hedgerows and deciduous and coniferous woodlots. Topography is gently rolling throughout most of this area. The interface between this zone and the adjacent Letchworth State Park is generally characterized by a heavily wooded buffer area. Views in the rural/agricultural area are generally open and include a mixture of fields, woodlots, and agricultural buildings. Due to the elevation of the proposed project relative to all locations in this area, and the screening effect of the dense surrounding vegetation, there are few, if any views of the project from this area.

Hamlet

This landscape type includes the hamlet of Portageville. This area is characterized by medium density residential development, typically located at the intersection of two or more major roads; in this case New York State Route 19a, and County Route 436. Residential development in this area is less dense than in larger villages or cities, but more intense than in the Rural/Agricultural area. Homes may border on fallow, or active agricultural land. Land use within the hamlet area is largely residential, although some small-scale commercial business and agricultural activity also occurs. As in the Rural/Agricultural area, the topographic location of the proposed project, combined with the screening effect of vegetation and structures, there are few, if any views of the proposed project from this area.

Park

This area is distinguished by steep gorge topography, a major river (including waterfalls), and heavily wooded slopes. It is also distinguished by its status as a significant recreational and scenic area and the heavy use it receives from tourists and recreational users. Use of the park is almost exclusively recreational, with views of the river gorge being a primary attraction. Virtually all significant views of the proposed project are from within this area.

Viewer/User Groups

Two categories of viewer/user groups were identified within the visual study area. These include the following:

Local Residents

Local residents include those who live and work within the study area. They generally view the landscape from their yards, homes, local roads and/or places of business. Residents are concentrated in the villages and hamlets, but occur throughout the study area. Local residents may travel through the project area on Routes 19A, 456, a variety of local roads and occasionally on park roads. However, use of park roads requires the payment of an entrance fee during the late spring, summer and early fall, which may limit the use of these roads for purely transportation purposes. Except when involved in local travel, residents are likely to be stationary, and have frequent or prolonged views of certain landscape features. Local residents may view the landscape from ground level or elevated viewpoints (typically upper floors/stories of homes). Residents' sensitivity to visual quality is variable, and may be tempered by the aesthetic character/setting of their neighborhoods or work place. For example, residents with a view of existing commercial facilities may be less sensitive to landscape changes than those with a view of open farmland. It is assumed, however, that all local residents are familiar with the local landscape and may be very sensitive to changes in particular views that are important to them.

Park Visitors

The primary user group to be affected by the proposed project in the study area is park visitors. It is estimated that Letchworth State Park receives 600,000 visitors per year. While their activities are primarily recreational, they may view the landscape in a variety of different ways from inside the park.

- **Motorists** within the park will view the landscape while traveling to destinations within the park on park roads, or from parking areas within the parks.
- **Active users** such as bicyclists, hikers, fishermen will see the landscape from more remote points such as trails and waterfront areas.
- **Passive users**, such as picnickers, casual walkers, diners at the Glen Iris Inn, and photographers will see the landscape from established scenic overlooks and recreation areas.

Visual quality of the scenery will be a very important part of the recreational experience for all of these categories of park visitors. Passive users of the park, in particular, have the opportunity to concentrate on views and observe the surrounding area for a prolonged period of time and may be particularly sensitive to visual change. Due to the variety of different viewpoints along the park roads, recreation areas and trails in the vicinity of the proposed project, a wide variety of viewpoints will be available to park visitors.

Visually Sensitive Resources

The area within and adjacent to the visual study area includes several sites that the New York State Department of Environmental Conservation (NYSDEC) Visual Policy (DEP-00-2) considers scenic resources of statewide significance (See Appendix A). These include the following:

Sites listed on the National or State Register of Historic Places:

The study area includes 2 sites that are currently listed on the National Register of Historic Places (NYSOPRHP Website). Register-listed sites and districts that occur within the visual study area include the following:

1. Letchworth State Park
2. The First Universalist Church of Portageville (East Rowe Road at NY Route 19a)

State Parks:

As previously noted, Letchworth State Park occurs within the visual study area. The park features a 17-mile gorge, which has three major waterfalls. Dense forest encompasses the park and covers the gorge walls. There are 66 miles of hiking trails and additional trail opportunities for horseback riding, biking, snowmobiling, and cross-country skiing. The park also includes over 270 campsites, 82 multi-season cabins, numerous picnic areas, two pools, and the historic Glen Iris Inn. Hunting and fishing are allowed, as well as whitewater rafting, kayaking, and hot air ballooning.

Urban Cultural Parks:

NONE IN THE STUDY AREA

State Forest Preserve:

NONE IN THE STUDY AREA

National Wildlife Refuges:

NONE IN THE STUDY AREA

State Wildlife Management Areas:

There are no State WMAs in the study area, but the Genesee Valley Wildlife Management Area is about 3 miles south of the proposed project location.

National Natural Landmarks:

NONE IN THE STUDY AREA

National Park System Lands:

NONE IN THE STUDY AREA

Wild, Scenic and Recreational Rivers:

The 17-mile section of the Genesee River located in Letchworth State Park is designated as a Scenic River under the NYS Wild, Scenic and Recreational River System Act (ECL Title 27, Article 15).

Designated Scenic Areas of Statewide Significance:

NONE IN THE STUDY AREA

Designated Scenic Sites/Overlooks:

Seventeen designated scenic overlooks are located in Letchworth State Park. These scenic overlooks generally occur along the edge of the Genesee River Gorge, and provide views of the river and waterfalls.

State or Federal Designated Trails:

1. Letchworth State Park Trails — Marked and named trails, total approximately 45 miles. The year-round trails are of varying levels of difficulty (easy to moderate slopes), and provide hiking opportunities

for all skill levels. Views from the foot trails are generally contained within the gorge walls and focused on the Genesee River corridor.
2. Finger Lakes Trail — Approximately 24 miles of the Finger Lakes Trail (FLT) occurs within Letchworth State Park. The trail runs along the eastern edge of the gorge and offers unique views of the Genesee River. The FLT is accessed from Portageville Road to the south, and the Mount Morris Dam Entrance to the north.

Adirondack Park Lands and Scenic Vistas:
NONE IN THE STUDY AREA

State Nature and Historic Preserve Areas:
NONE IN THE STUDY AREA

Palisades Park Land:
NONE IN THE STUDY AREA

Bond Act Properties
(Exceptional Scenic Beauty, Open Space): NONE IN THE STUDY AREA

Beyond the scenic resources of statewide significance listed above, the project study area also includes areas that are locally significant. These include population centers and heavily used transportation corridors. The most significant of these are listed below:

Areas of Intensive Land Use:
The hamlet of Portageville is the area of most concentrated and intensive land use in the visual study area. The hamlet contains a variety residential, commercial and municipal uses.

Transportation Corridors:
The visual study area includes two highways that could be considered visually sensitive due to the number of drivers that travel these roads on a daily basis. According to the New York State Department of Transportation (NYSDOT) website, 2004 traffic counts indicate the following average annual daily traffic on these roads:
• State Route 19a, from the intersection of County Route 436 to Portageville, averaged 3165 vehicles per day.
• County Route 436, from County Route 70 to the Livingston/Wyoming County line, averaged 3560 vehicles per day.
No traffic count data was available for the Park Road along the west side of the gorge.

The locations of visually sensitive resources within the visual study area are illustrated in Figure 4.

VISUAL IMPACT ASSESSMENT METHODOLOGY
The Visual Impact Assessment procedures used for this study are consistent with the methodology developed by the U.S. Department of the Interior, Bureau of Land Management (1980) and the NYS Department of Environmental Conservation visual policy (2000). BLM methodology was selected because it provides specific tools to identify and evaluate visual contrast and to analyze potential visual impacts and apply mitigation techniques to ensure modifications to the landscape are in harmony with

their surroundings. The specific techniques used to assess potential project visibility and visual impacts are described in the following section.

Project Visibility

An analysis of project visibility was undertaken to identify those locations within the study area where there is potential for the proposed bridge replacement to be seen from ground-level vantage points. This analysis included identifying potentially visible areas on viewshed maps, preparing line of sight cross sections, and verifying visibility in the field. The methodology employed for each of these assessment techniques is described below.

Viewshed Analysis

Topographic viewshed maps for the study area were prepared using USGS digital elevation model (DEM) data (7.5-minute series) and the Global Mapper computer program. Two 1.5-mile radius viewsheds were mapped, one to illustrate "worst case" visibility (with no screening effect from structures or vegetation) and the other to illustrate potential visibility with typical 50' height vegetation (with vegetation limits taken from aerial photography). The viewshed analyses were based upon the existing bridge alignment as indicated in the project layout plan (see Figure 2).

The Global Mapper program defines the viewshed (using topography only or topography with vegetation) by reading every cell of the DEM data and assigning a value based upon visibility from observation points throughout the study area. The resulting topographic viewshed maps define the maximum area from which the proposed project could potentially be seen within the study area. A number of factors can influence project visibility, however, and merely being in the viewshed does not guarantee actual views of the project.

Cross Section Analysis

To analyze the screening effect of vegetation within the study area, four representative line-of-sight cross sections (each approximately 1.5-miles long) were cut through the study area. Cross section locations were chosen so as to pass through visually sensitive areas and to provide representative cross-sections through major axes of the project area. The cross sections are based on forest vegetation and topography as mapped on the 7.5-minute USGS quadrangle maps and digital aerial photographs. For the purposes of this analysis, a uniform 50 foot tree height was assumed. A 10 fold vertical exaggeration was used to make areas of visual screening more apparent graphically.

Field Review

Actual visibility of the existing bridge was evaluated in the field on November 11, 2009 during partial leaf-off conditions. A field crew drove public roads and visited public vantage points within the 1.5-mile radius (7 square mile) study area to document points from which the bridge could or could not be seen. Photos were taken from 46 representative viewpoints within the study area (See Appendix B). Visibility was documented at each viewpoint with photos and field notes. Viewpoint locations were determined using handheld global positioning system (GPS) units and high resolution aerial photographs. The time and location of each photo were documented on all electronic equipment (cameras, GPS units, etc.) and noted on field maps and data sheets (see Figure 9 and Appendix C). M&M staff visited the site on October 19, 2009 and C&S staff visited the site again on November 17, 2009 to obtain additional photos to be used in the development of simulations. All photos were obtained using Nikon D50 and D3X digital

SLR cameras. Specific data regarding the camera settings for each of the simulation viewpoints is included in Appendix E.

Project Visual Impact

Beyond evaluating potential project visibility, the VIA also examined the visual impact of the proposed bridge replacement on the aesthetic resources and viewers within the visual study area. This assessment involved creating computer models of the proposed bridge and bridge alignment, selecting representative viewpoints within the study area, and preparing visual simulations of the proposed project. These simulations were then evaluated by a panel of landscape architects and visual impact specialists to determine the type and extent of visual impact resulting from project construction. Details of the visual impact assessment procedures are described below.

Viewpoint Selection

From the photo documentation conducted during field verification, C&S, in consultation with State Parks, selected a total of 4 viewpoints for development of visual simulations. These viewpoints were selected to illustrate typical views of the proposed project that will be available to representative viewer/user groups from sensitive sites within the study area. The selected viewpoints also include a variety of viewer distances to illustrate the range of visual change that will occur with the project in place. Location of the selected viewpoints is indicated in Figure 9.

A description and the reasons for selection of each viewpoint are described below:

- **Viewpoint A** - View from the an overlook along the Gorge Trail (Trail #1) looking south toward the upper falls approximately 800 feet from the bridge. - This viewpoint was selected because it represents an important overlook point where the existing bridge is a dominant feature in the landscape. This overlook is a popular spot for visitors to view the falls and take photographs. The viewpoint is located at a stone paved overlook along the park trail which extends from the picnic area south of the Glen Iris Inn to the parking area immediately south of the existing bridge west abutment.
- **Viewpoint B** - View from Inspiration Point overlook looking south toward the middle and upper falls, approximately 5500 feet from the bridge. - This viewpoint was selected because it represents another important overlook point where the existing bridge is a significant feature in the background of the landscape. This overlook is also a popular spot for visitors to view the falls and take photographs. There is a parking area and a short trail to allow easy access to this viewpoint from the main Park Road on the west side of the gorge.
- **Viewpoint C** - View from an overlook along the Gorge Trail (Trail #1) looking south toward the upper falls, approximately 400 feet from the bridge. - This viewpoint was selected because it also represents an important overlook point where the existing bridge is a dominant feature in the landscape. This overlook is a popular spot for visitors to view the falls and take photographs. The viewpoint is located at a stone paved overlook along the same park trail which extends from the picnic area south of the Glen Iris Inn to the parking area immediately south of the existing bridge west abutment, but is located further up the trail, closer to the bridge.
- **Viewpoint D** - View from the Park Road at the bridge underpass from the south, approximately 100 feet from the bridge. – This viewpoint was selected because it represents a significant view of the bridge for motorists on the Park Road. The southern approach was selected because it provides a longer period of visibility for motorists, and provides the most potential contrast between new and existing alignment locations.

Visual Simulations

To show anticipated visual changes associated with the proposed project, high-resolution computer enhanced image processing was used to create realistic photographic simulations and renderings of the completed project from each of the four selected viewpoints. The photographic simulations/renderings were developed by constructing a three-dimensional computer model in Rhinoceros®, based on the bridge specifications developed by Modjeski and Masters, and the survey coordinates of the proposed facilities. Adobe® Photoshop® was also employed to prepare the background image for views not intended to show the existing bridge. Visual simulations were prepared by Modjeski and Masters.

Two dimensional vector-based geometry from two dimensional elevation drawings was imported into Rhinoceros®. The two dimensional elevation was then converted into three dimensional elements in Rhinoceros® using the cross-sectional properties of the arch ribs, top chord, trough and remaining structural elements. Known reference points on the existing bridge (such as truss and tower leg joints) were added to the three dimensional modeling environment relative to the proposed bridge. Using the known reference points, the three dimensional model was then superimposed and aligned with photographs from each of the viewpoints. Individual camera/perspective properties (height, roll, precise lens setting) were utilized to align and match the known reference points within the view. This process ensures that project elements are shown in proportion, perspective, and proper relation to the existing landscape elements in the view. Consequently, the alignment, elevation, dimensions and location of the proposed bridge will be accurate and true in their relationship to other landscape elements in the photo.

Material textures and the suggested exterior color/finish of the bridge were then added to the model and the appropriate sun angle was simulated based on the specific date, time and location (latitude and longitude) at which each photo was taken. This information allows the computer to accurately illustrate highlights, shading and shadows on the proposed bridge. A light dome was used to simulate secondary lighting effects (such as light bounces from trees and roadway elements). The model was then rendered to create the output simulation.

Adobe® Photoshop® was used for final editing and compositing of the output simulation. Pixels from the original photograph were layered to add depth (e.g., trees in front of the bridge), and to more accurately replicate conditions present in the photographs.

Images of the computer model and available viewpoint data used in this VIA are shown in Appendix D and E, respectively.

Panel Evaluation

A panel of one registered landscape architect and two visual impact assessment specialists was asked to describe the visual character of the existing view, then compare the existing view to each of the proposed project alternative views and analyze and evaluate the contrasting elements. Each of the panel members has experience in visual impact assessment (see Appendix G for resumes). Digital color prints (11 x 17-inch) of the before and after photos from each selected viewpoint were evaluated by the panel.

The Bureau of Land Management's Visual Contrast Rating Worksheet (Form 8400-4) was used as a basis for the panel evaluation. In addition, the methodology published in Smardon, et. al (1979) was reviewed by the rating panel for additional background in the contrast rating process. The basic philosophy underlying the BLM contrast rating system is that the degree to which a proposed project affects the visual quality of a landscape depends on the visual contrast created between a project and existing landscape. The contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison and to describe the visual contrast created by the proposed project.

For the purposes of this project, the contrast ratings from the BLM worksheet were given the following values: Strong=3; Moderate=2; Weak=1; and None=0. For the two alternatives (existing bridge and new bridge, and new bridge only) at each viewpoint, these scores were added to provide an overall contrast rating. These overall contrast rating scores provide a means to evaluate the relative degree of contrast of each of the alternatives to the existing condition. In addition, supplemental rating panel comments on each simulation were recorded to evaluate the project's overall visual impact.

VISUAL IMPACT ASSESSMENT RESULTS

Project Visibility

Topographic viewshed analysis (Figure 4) indicates that the proposed project has the potential to be visible in a small portion of the 1.5-mile radius study area. Overlaying the composite viewshed map on the map of visually sensitive sites shows that some of the visually sensitive sites identified in the study area fall within the viewshed, primarily Letchworth State Park roads, trails, and scenic overlooks, the Genesee River, and the Finger Lakes Trail. In general, the height of surrounding topography and vegetation severely limits visibility of the proposed project to areas within the Park.

Cross section analysis (Figures 5-8) revealed that along selected lines of sight, vegetation and structures will significantly decrease potential project visibility, when compared to the results of the viewshed analysis. The screening effect of topography is illustrated in each of the cross-sections which confirm a lack of visibility from areas outside of the park.

Field review indicated that actual project visibility (as indicated by visibility of the existing bridge) is likely to be much more limited than suggested by viewshed mapping and cross section analysis. This is due to the fact that screening provided by trees within the study area is more extensive and effective than assumed in the previous analyses. The result is that certain sites/areas where "potential" visibility was indicated by viewshed mapping and cross section analysis, were actually well screened from views of the proposed project. Field review revealed that on roads outside Letchworth State Park, dense vegetation typically limits any long-distance views to the park. Field review also confirmed a lack of visibility from the cemetery on East Koy Road, and confirmed that ground-level views within the hamlet of Portageville are typically blocked by buildings, vegetation and topography. In the rural/agricultural portions of the study area, hedgerows and trees also blocked views into the park. Predictably, views were available from several sensitive sites within the park, including the park road, scenic overlook and the Finger Lakes Trail. However, the bridge could not be seen from the Glen Iris Inn itself, or points north of the Inspiration Point overlook. Field review was conducted during partial to full leaf-off conditions, which provides a better indicator of potential project visibility than leaf-on conditions.

Visual Impact Assessment Rating

On January 11, 2010, a panel of one registered landscape architect and two visual impact specialists evaluated the visual impact of the proposed project, as described in the Methodology section of this report. Utilizing 11 x 17-inch color laser prints of the selected representative viewpoints described above, the rating panel members evaluated the existing and proposed views, assigning each view quantitative visual contrast ratings on a scale ranging from None (0), Weak (1), Moderate (2), and Strong (3). Each panel member's ratings were added to get an overall score for each viewpoint, and these scores were then compiled to provide comparative totals for each alternative. Copies of the completed rating forms are included in Appendix F, and the results of this process are summarized in Appendix H. The rating panel completed scoring worksheets for each of the selected viewpoints, but did not include the results for Viewpoint A in the composite scoring analysis due to differences in the simulation

methodology for this viewpoint. (Detailed image data was not available for this viewpoint, and a train was added to the existing and proposed bridges, a scenario which is not representative of the typical view of the bridge.)
In general, the panel found greater visual contrast in the alternative with the existing bridge remaining alongside the new bridge. Key elements of this greater contrast were the difference in overall mass of the two structures, the difference in the thickness of the members, and the color difference. Also, the strong curvilinear line of the new bridge arch was in strong contrast with the mainly horizontal and vertical lines of the existing bridge. In some of the views, the superimposing of the two different bridge structures created irregular textural patterns which also increased visual contrast.

Analysis of Existing and Proposed Views

To illustrate anticipated visual changes associated with the proposed project, photographic simulations/renderings of the completed facilities from each of the four selected viewpoints were used to evaluate project visibility and appearance. Rating panel review of these images, along with photos of the existing view, allowed for comparison of the aesthetic character of each view with and without the proposed project in place. Results of this evaluation, summarized from comments recorded by the rating panel (included in Appendix F) are presented below.

Viewpoint A

Existing View (Figure 10)

This view is from an overlook near the upper falls along the Gorge Trail (Trail #1) on the west side of the gorge looking south, approximately 800 feet from the bridge. This is an important scenic view of the bridge which is seen by many park visitors. The bridge is a dominant visual feature in this view, largely silhouetted against the open sky. The view is enclosed on the left by the sloping vegetated gorge wall and the more vertical exposed stone gorge wall on the right, as well as overhanging vegetation. The white water of the upper falls is contrasted with the smooth grey-green water below. The bridge structure is a repetitive, rectilinear structure in a landscape of irregular, organic forms.

Proposed Project – Existing and New Bridge Alternative (Figure 11)

With the existing and proposed new bridge in place, additional structural elements are now present in the view. The new bridge is behind the existing bridge in this view, and the interaction of the vertical forms of the existing bridge supports and strong arc of the new bridge superstructure creates a strong visual contrast. The top deck of the new bridge aligns with the bottom of the existing bridge trusses, creating a much stronger horizontal line and mass than in the existing view. The new bridge is bolder in line weight, thicker members, and in overall mass, and is strongly contrasted against the sky. A weak color contrast between the brown, weathered steel color of the new bridge and the black members of the existing bridge is perceptible.

Proposed Project – New Bridge Only Alternative (Figure 12)

With the existing bridge removed, and the new bridge in place in this view, there are offsetting visual impacts. The new bridge is bolder in line weight due to the heavier members, and greater in mass due to the larger area enclosed by the truss superstructure. However, with the removal of the two central supports of the existing bridge, the vegetation/sky interface and the water/land interface are not interrupted by structural elements. The brown weathered steel color of the new bridge is more in harmony with the green/grey/brown earth tone vegetation, stone and water elements in this view.

Viewpoint B

Existing View (Figure 13)

This view is from the Inspiration Point overlook, at the west rim of the gorge looking south, approximately 5500 feet from the existing bridge. This is an important scenic view of the bridge which is seen by many park visitors; a dedicated parking area along the Park Road makes it easy to access this overlook. The bridge is a significant visual feature in this view, framed by the vertical lines of the gorge walls and contrasted against the lighter colored background of the vegetation. The white water of the middle falls is contrasted with the smooth grey-green water above. The bridge structure is a repetitive, rectilinear structure in a landscape of irregular, organic forms. The bridge's lower structure fades in this view in the mist created by the upper falls.

Proposed Project – Existing and New Bridge Alternative (Figure 14)

With the existing and proposed new bridge in place, additional structural elements are now present in the view. The new bridge is behind the existing bridge in this view, and there is a similar interaction of the vertical forms of the existing bridge and the strong arc of the new bridge superstructure as in Viewpoint 'A'. The top deck of the new bridge aligns with the top deck of the existing bridge, but greater contrast is visible in the bridge superstructure. The new bridge is bolder in line weight, thicker members, and in overall mass, and is strongly contrasted against the sky. A weak color contrast between the brown, weathered steel color of the new bridge and the black members of the existing bridge is perceptible.

Proposed Project – New Bridge Only Alternative (Figure 15)

With the existing bridge removed, and the new bridge in place in this view, there are offsetting visual impacts. The new bridge is bolder in line weight due to the heavier members (especially in the bottom arch), and greater in mass due to the larger area enclosed by the truss superstructure. However, with the removal of the two central supports of the existing bridge, the vegetation/sky interface and the water/land interface are not interrupted by structural elements. The brown weathered steel color of the new bridge is more in harmony with the green/grey/brown earth tone vegetation, stone and water elements in this view.

Viewpoint C

Existing View (Figure 16)

This view is from an overlook near the upper falls, along the Gorge Trail (Trail #1), approximately 400 feet from the bridge. As with Viewpoints A and B, this is an important scenic view of the bridge which is seen by many park visitors. The bridge is a dominant visual feature in this view, largely silhouetted against the open sky, similar to Viewpoint A. The view is enclosed on the left by the sloping vegetated gorge wall and the more vertical overhanging vegetation on the right. The white water of the upper falls is contrasted with the dark shadowed shoreline. The bridge structure is again a repetitive, rectilinear structure and is dominant in its height and mass in the landscape.

Proposed Project – Existing and New Bridge Alternative (Figure 17)

With the existing and proposed new bridge in place, additional structural elements are now present in the view. The new bridge is behind the existing bridge in this view, and the interaction of the vertical forms of the existing bridge supports and strong arc of the new bridge superstructure creates a strong visual contrast. Because of the close proximity of the bridges and the low elevation of the viewpoint in relation to the bridges, both bridge decks are visible in this viewpoint, creating two strong horizontal

lines silhouetted against the sky. The new bridge is bolder in line weight, thicker members, and in overall mass. A weak color contrast between the brown, weathered steel color of the new bridge and the black members of the existing bridge is perceptible.

Proposed Project – New Bridge Only Alternative (Figure 18)

With the existing bridge removed, and the new bridge in place in this view, there are again offsetting visual impacts. The new bridge is bolder in line weight due to the heavier members, and greater in mass due to the larger area enclosed by the truss superstructure. However, with the removal of the two central supports of the existing bridge, the view becomes less dominated by geometric structural forms, and the natural lines at vegetation, water and landform edges are not interrupted. The brown weathered steel color of the new bridge is more in harmony with the yellow/orange/brown vegetation, grey stone and grey/green water elements in this view.

Viewpoint D

Existing View (Figure 19)

This view is looking north from the southern approach to the bridge underpass along the Park Road. It is approximately 100 feet from the bridge. This view is representative of a significant view of the bridge for motorists and hikers beginning their trek at the parking area just south of the existing bridge. The bridge is a dominant visual feature in this view, with bold horizontal line forms and a repetitive texture of thinner vertical and diagonal superstructure forms. At this close range, a higher level of detail is visible in the bridge structure. Upright, more irregular forms of vegetation partially screen the bridge, but do not hide the mass of the bridge. The line created by the pavement edges and paint striping reinforce a focal point at the existing bridge support. The view is enclosed on the left by the sloping landform extending from the bridge abutment and the more weakly defined on the right by the irregular forms of vegetation at the road edge.

Proposed Project – Existing and New Bridge Alternative (Figure 20)

With the existing and proposed new bridge in place, a significant contrast is evident. The new bridge is in front of the existing bridge in this view, and the heavier mass of its thicker deck structure and support pier and the deep shadow lines of the structural elements add visual mass to the view. The simple and bold form of the new bridge contrasts with the lighter and more complex texture and line weight of the existing bridge. The closer proximity of the existing bridge in this viewpoint relative to the previous views allows more dark brown color to be seen on the existing bridge; for this reason, less color contrast between the two bridges exists in this view.

Proposed Project – New Bridge Only Alternative (Figure 21)

The new bridge is heavier in mass and line weight that the existing bridge and has less complexity in line and texture. This visual contrast is offset by the more open view of the sky and the landform/sky/vegetation edges created through the removal of the existing bridge.

VISUAL IMPACT ASSESSMENT SUMMARY

The VIA for the Portageville Rail Bridge Replacement Project allows the following conclusions to be drawn:

1. *Project Visibility*: Viewshed mapping, cross section analysis, and field verification indicate that the project will be visible only from areas inside Letchworth Park. Some visually sensitive resources will be impacted by the project. These include the Finger Lakes Trail, overlooks and trails in the immediate area within Letchworth Park, and the main Park Road. At other sites, including the hamlet of Portageville, State Route 19A and County Route 456, the project will either not be visible, will be significantly screened by foreground vegetation and structures, or will be distant enough that visual impacts will be insignificant.
2. *Contrast Rating*: Evaluation by the panel of visual impact assessment specialists indicates that the existing bridge and new bridge alternative has a greater overall visual contrast with the visual/aesthetic character of the surrounding area than the new bridge only alternative.

VISUAL MITIGATION SUMMARY

Mitigation options are limited, given the nature of the project and the constraints on the horizontal and vertical alignment of the railway. The new bridge location is limited to remaining very close to the existing horizontal and vertical rail alignment. However, in accordance with NYSDEC Program Policy DEP-00-2, mitigation measures including professional design and siting, decommissioning and offsets were considered. These included the following:

Professional Design and Siting

- **Screening -** While it would not be possible, or desirable to screen the entire view of the new bridge structure, in certain locations, it may be beneficial to use supplemental vegetation to selectively screen parts of the proposed project. One such location is at the bridge abutment on the west side of the new bridge, where the new bridge supports are a dominant feature visible from the Park Road and adjacent trail. In this area, vegetation could be used to soften the contrast between this new structure and the surrounding landscape.
- **Alignment-** As mentioned above, it will not be feasible to make significant alterations to the alignment of the new bridge without major impacts to the rail lines approaching the bridge from both sides. In order to minimize these impacts, the close parallel alignment of the new bridge was selected.
- **Color-** One area which some mitigation of impacts may be achieved is through the color choice of the new bridge. The visual simulation of the new bridge showed a brown weathered steel color. While this is in contrast to the black surface appearance of the existing bridge, the rating panel felt that the brown color was more in harmony with the surrounding landscape, especially when it was not placed in contrast with the existing black bridge. It may be worthwhile to examine other earth-tone color options for the new bridge to maximize the visual compatibility of the structure to the surrounding landscape.
- **Arch Design-** The thicker members and the bold arc of the new bridge superstructure strongly contrasts with the thin members and rectilinear form of the existing bridge. However, while the new bridge is bolder in overall mass and line weight, it obscures less of the view of the landscape behind due to the elimination of the two center supports. The rating panel felt that this tradeoff resulted in greater visual compatibility for the new bridge. However, this advantage was lost in the scenario where both bridges remain.

Decommissioning

- Regarding decommissioning, DEP-00-2 states that “Removing an object from the landscape after its useful life is over reduces the duration of a visual impact”. In this case, the removal of the existing bridge could be a form of mitigation. This is supported by the contrast rating scores which found the new bridge only alternative to have a lower contrast.

Offsets

- Offsets can be used to mitigate visual impacts by correcting an existing aesthetic problem within the viewshed. If the new and existing bridge option is selected, converting the existing bridge to a pedestrian overlook could be an offset to the greater visual impact of this project alternative. The enhanced visual access that this amenity would provide could partially mitigate the decreased visual quality.

REFERENCES

NPS Website. National Register of Historic Places — New York, Livingston and Wyoming Counties.

NPS Website. National Natural Landmarks and National Heritage Areas for Livingston and Wyoming Counties.

New York State Assembly. January 18, 2005. New York State Consolidation Laws, Title 27, Wild, Scenic and Rivers System. Albany, N.Y.

OPRHP Website. State and National Listed Historic Sites for Livingston and Wyoming Counties.

NYSDEC. 2000. Program Policy: Assessing and Mitigating Visual Impacts. DEP-00-2. Division of Environmental Permits, Albany, New York.

NYSDEC. Website. Critical Environmental Areas, State Recreation Lands, and Wildlife Management Areas in Livingston and Wyoming Counties.

NYSDOT. Website. Traffic Counts for Route 19A and CR 456.

Smardon, R.C., D. Appleyard, S. Sheppard, and S. Newman. 1979. Prototype Visual Impact Assessment Manual. Pacific Southwest Forest and Range Experiment Station, Berkeley, CA

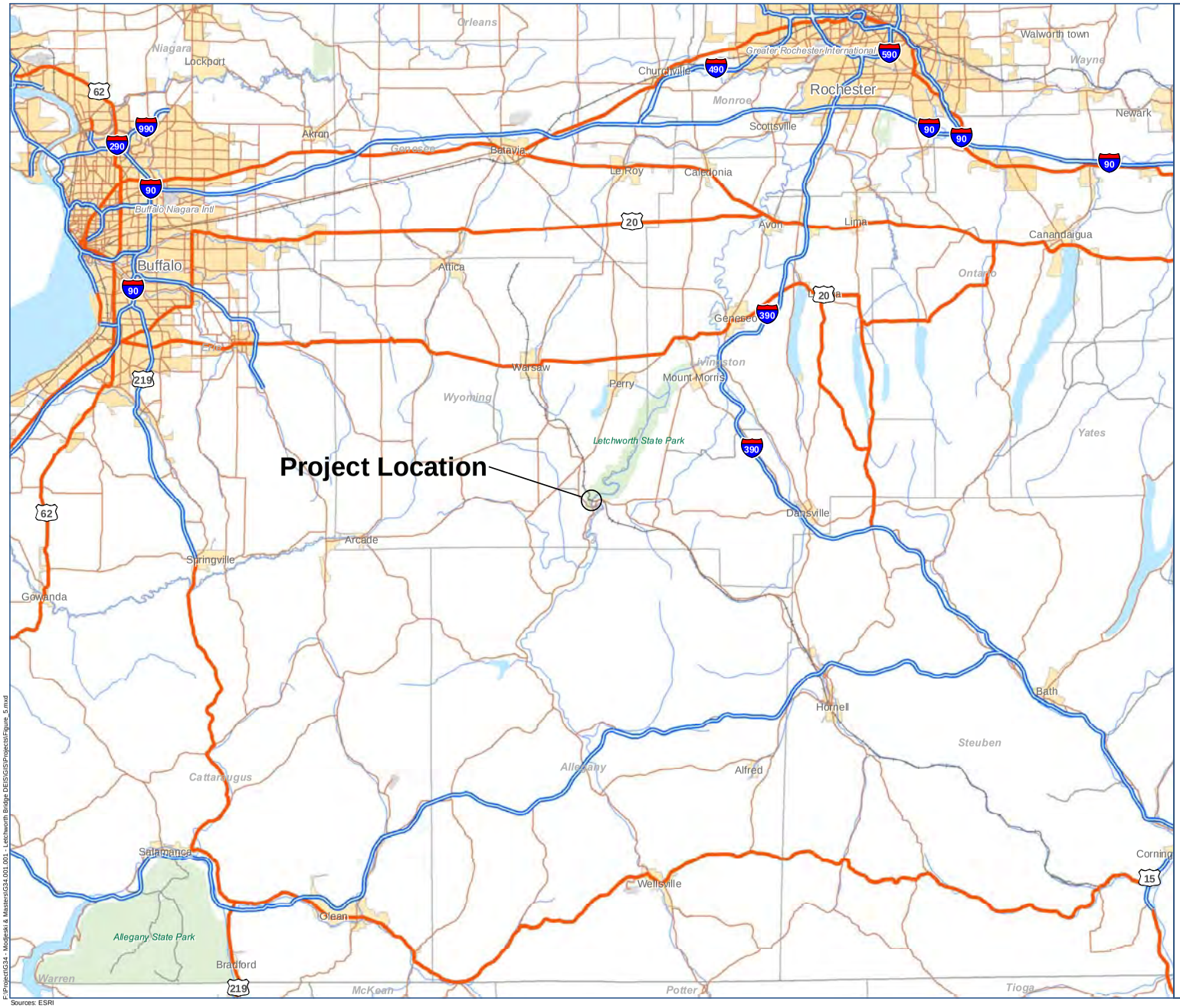
United States Department of the Interior, Bureau of Land Management. 1980. Visual Resource Management System. U.S. Government Printing Office. Washington, D.C.

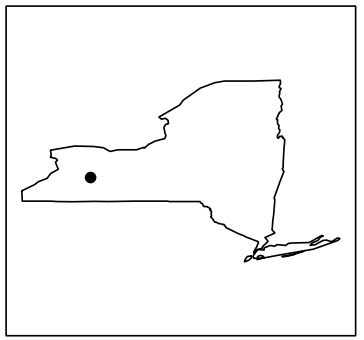
FIGURES

Figure 1

Project Location Map

Visual Impact Assessment
Portageville Rail Bridge Replacement





N

0 Miles 10

F:\Projects\G34 - Modjeski & Masters\G34.001.001 - Letchworth Bridge DEIS\GIS\Projects\Figure_5.mxd

Sources: ESRI

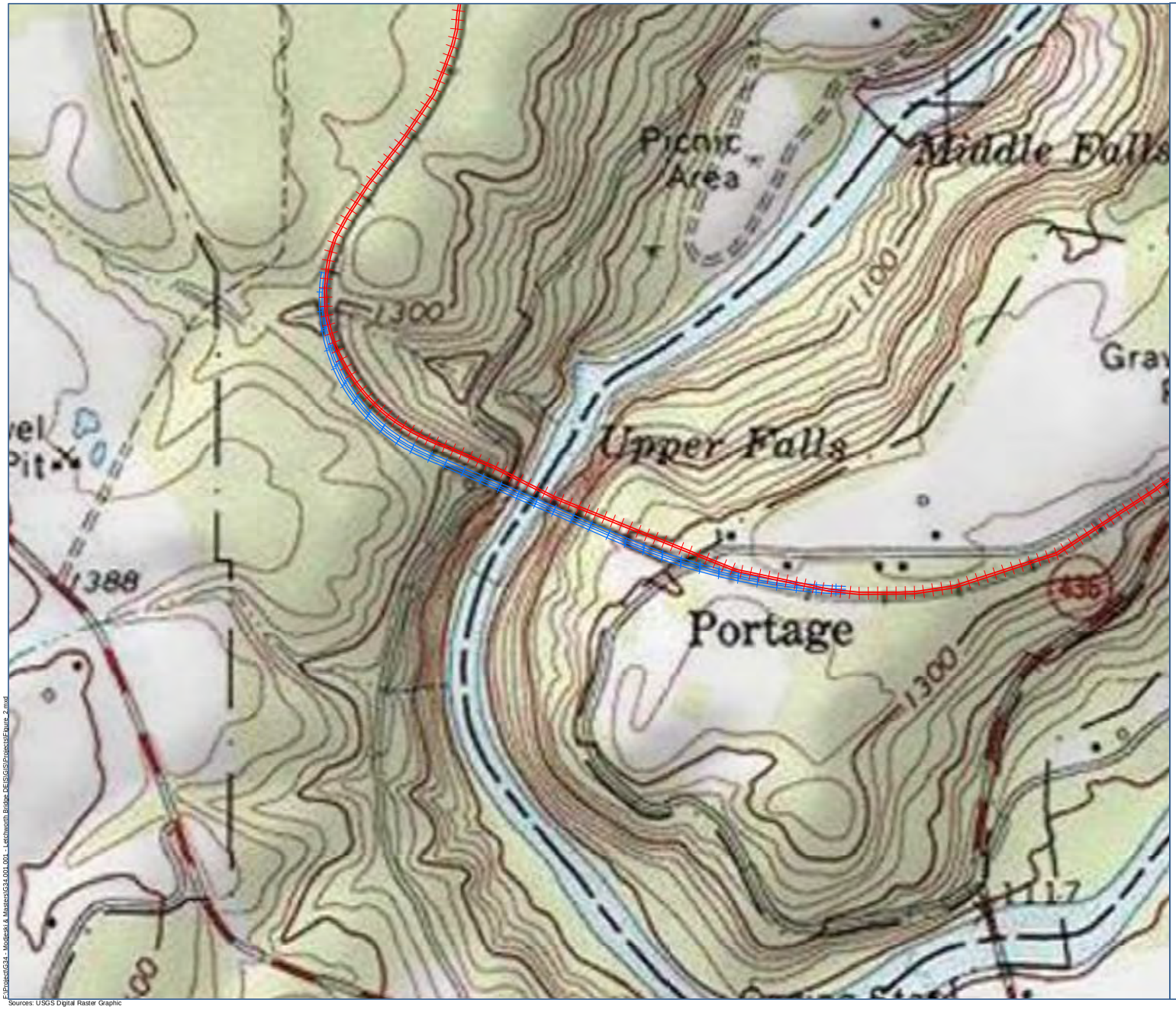


Figure 2

Proposed Project Layout Plan

Visual Impact Assessment
Portageville Rail Bridge Replacement

Legend

- Bridge Alternative
- Existing Railroad

N

0 500 Feet

C&S COMPANIES®

F:\Projects\G34 - Mollesk & Masters\G34.001.001 - Letchworth Bridge DEIS\GIS\Projects\Figure 2.mxd

Sources: USGS Digital Raster Graphic

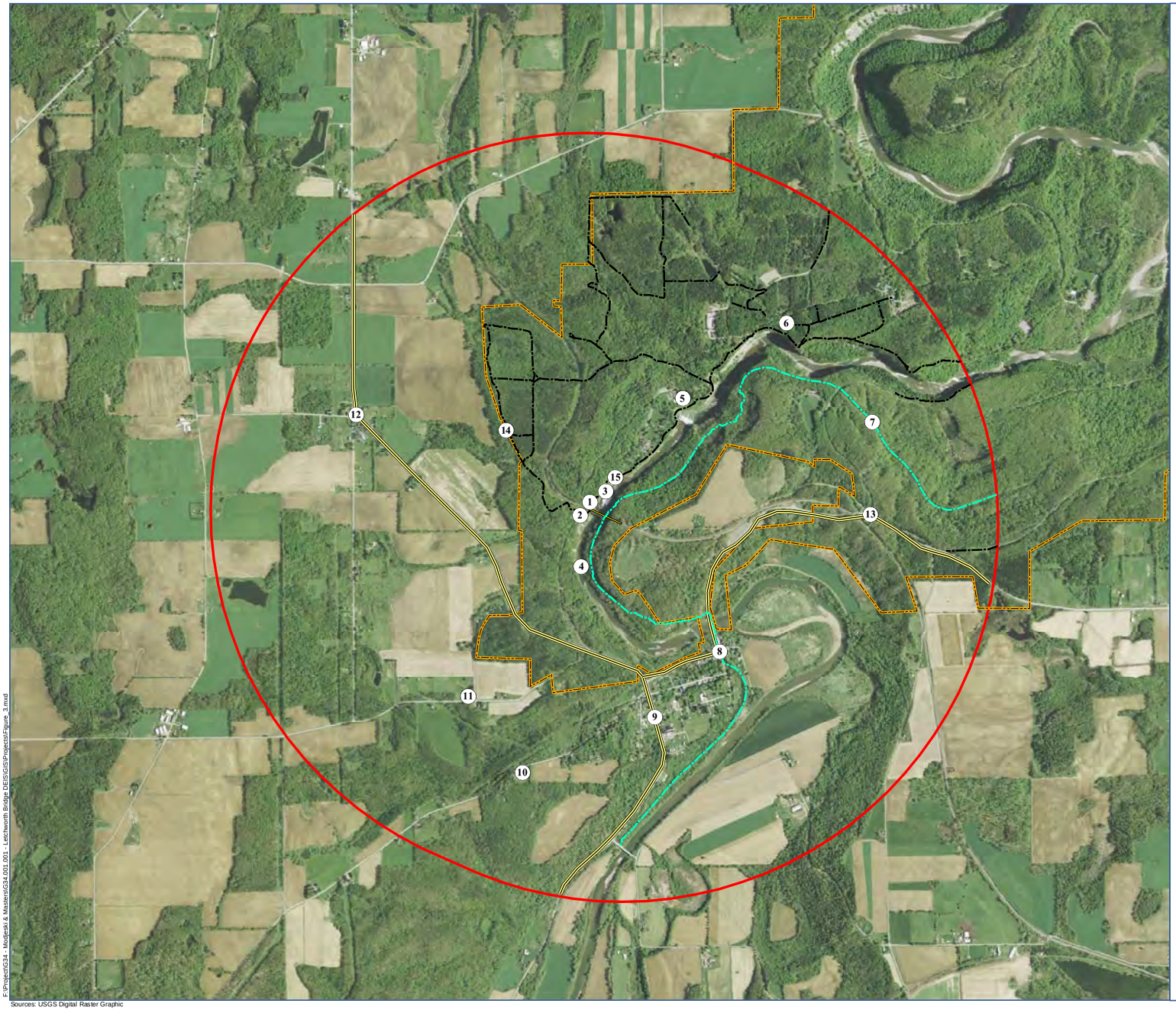


Figure 3

Visually Sensitive Sites Map

Visual Impact Assessment
Portageville Rail Bridge Replacement

Legend

Visually Sensitive Areas
1. Park Road South
2. Park Road North
3. Trail #1 - Close Up Vista
4. Genesee River
5. The Glen Iris Inn
6. Inspiration Point
7. Finger Lakes Trail
8. Hamlet of Portageville
9. Historic Church
10. Portageville Cemetary
11. Pennycook Cemetary
12. Rt. 19A
13. Rt. 436
14. Letchworth State Park Boundary
15. Low Falls Lookout

Bridge Outline

1.5 Mile Radius

Letchworth State Park

Letchworth State Park Trails

Finger Lakes Trails

Rt. 19 and Rt. 436

N

0 3,000 Feet

C&S COMPANIES®

F:\Project\GIS\4 - Mapfacts & Masters\GIS\4.001.001 - Letchworth Bridge DES\GIS\Projects\Figure_3.mxd

Sources: USGS Digital Raster Graphic

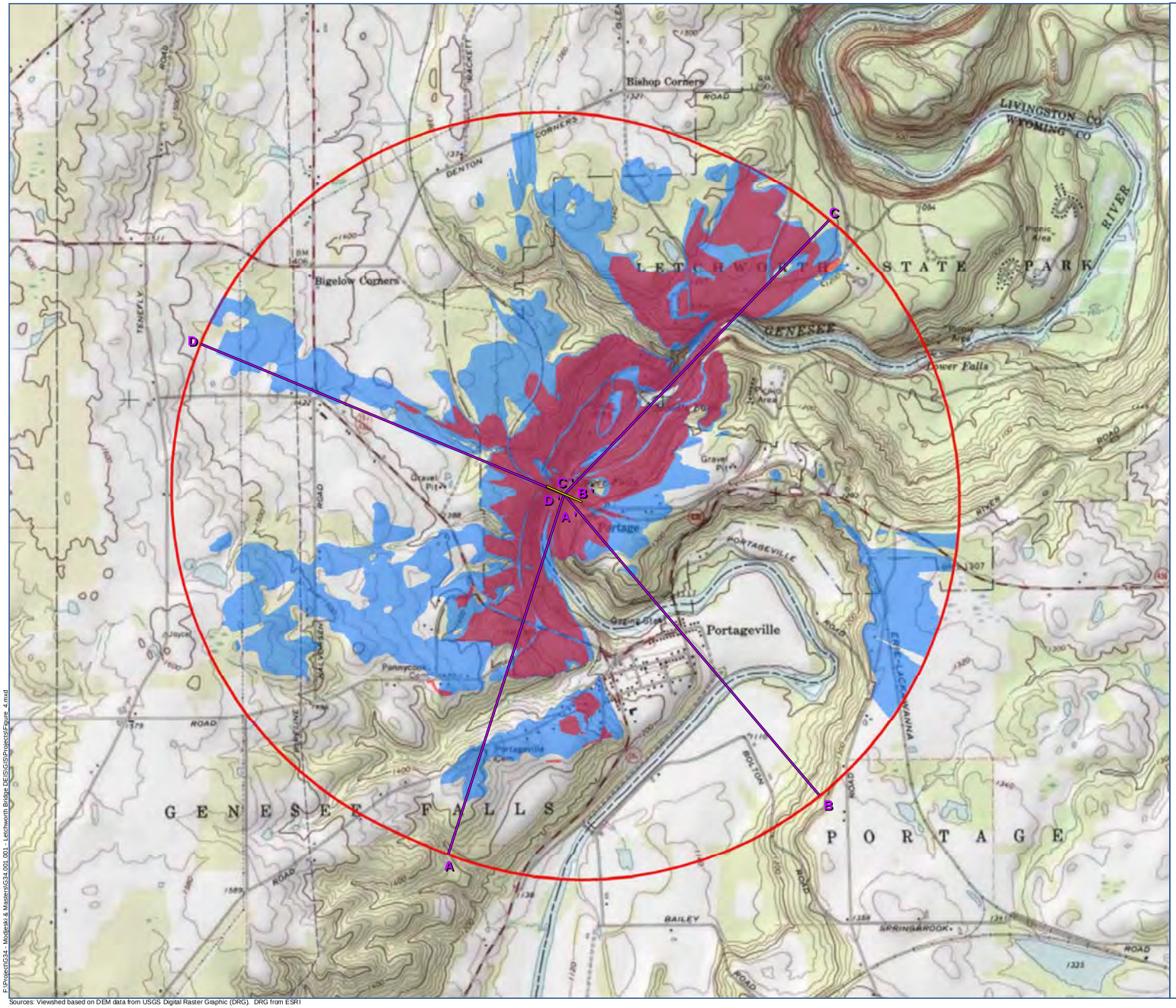


Figure 4

Viewshed Map

Visual Impact Assessment
Portageville Rail Bridge Replacement

Legend

- Bridge Outline
- 1.5 Mile Radius
- Visible Based on Topography
- Visible with 50 ft Tree Canopy
- Line-of-Sight Cross Sections

N

0 — 3,000 Feet

C&S COMPANIES®

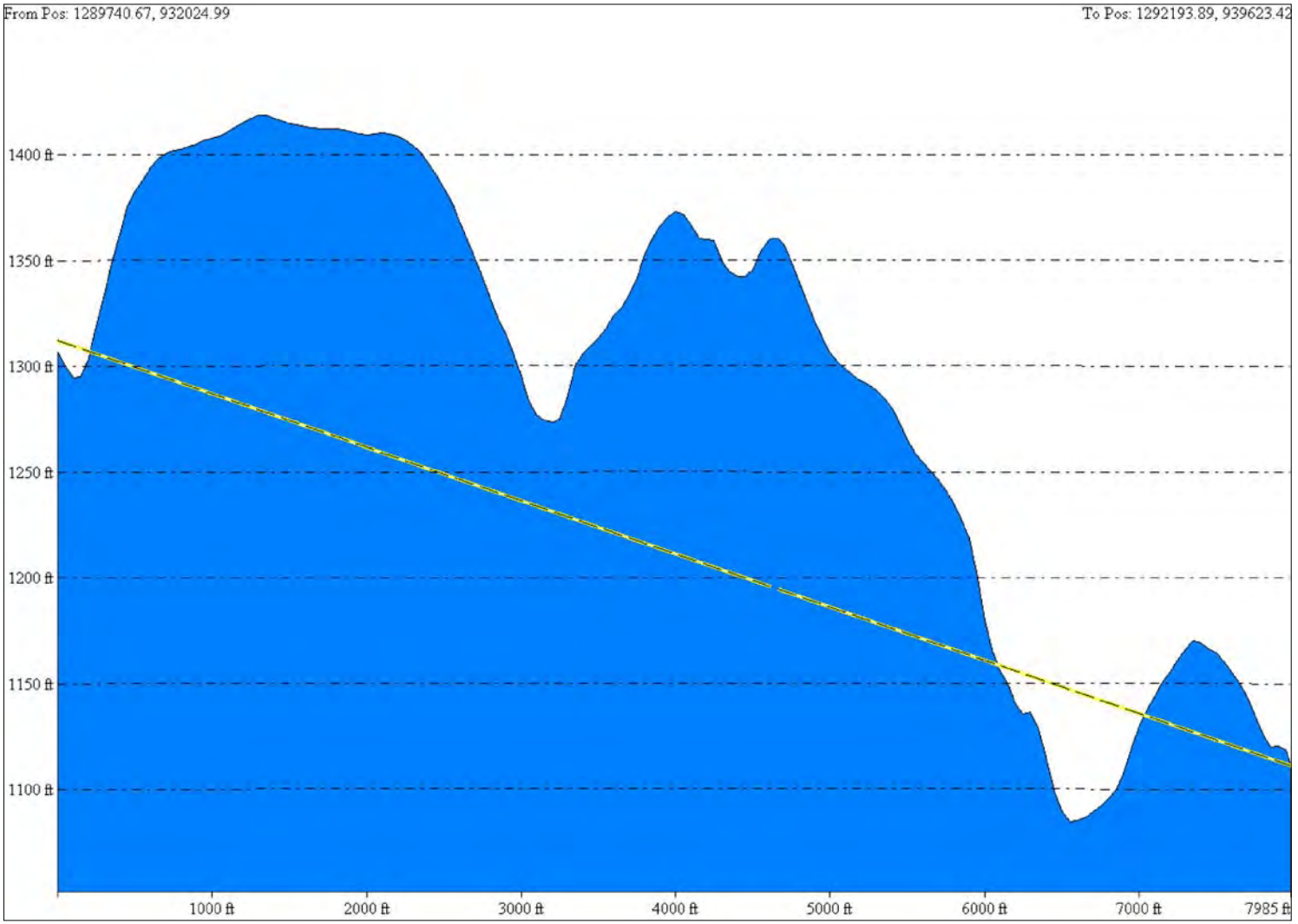
F:\Projects\G34 - Modjeski & Masters\G34.001.001 - Letchworth Bridge DES\GIS\Projects\Figure_4.mxd

Sources: Viewshed based on DEM data from USGS Digital Raster Graphic (DRG). DRG from ESRI

Figure 5

Line-of-Sight Cross Section

Visual Impact Assessment
Portageville Rail Bridge Replacement



Line-of-Sight from Portageville Rail Bridge (Point A) to edge of 1.5 mile radius (Point A')

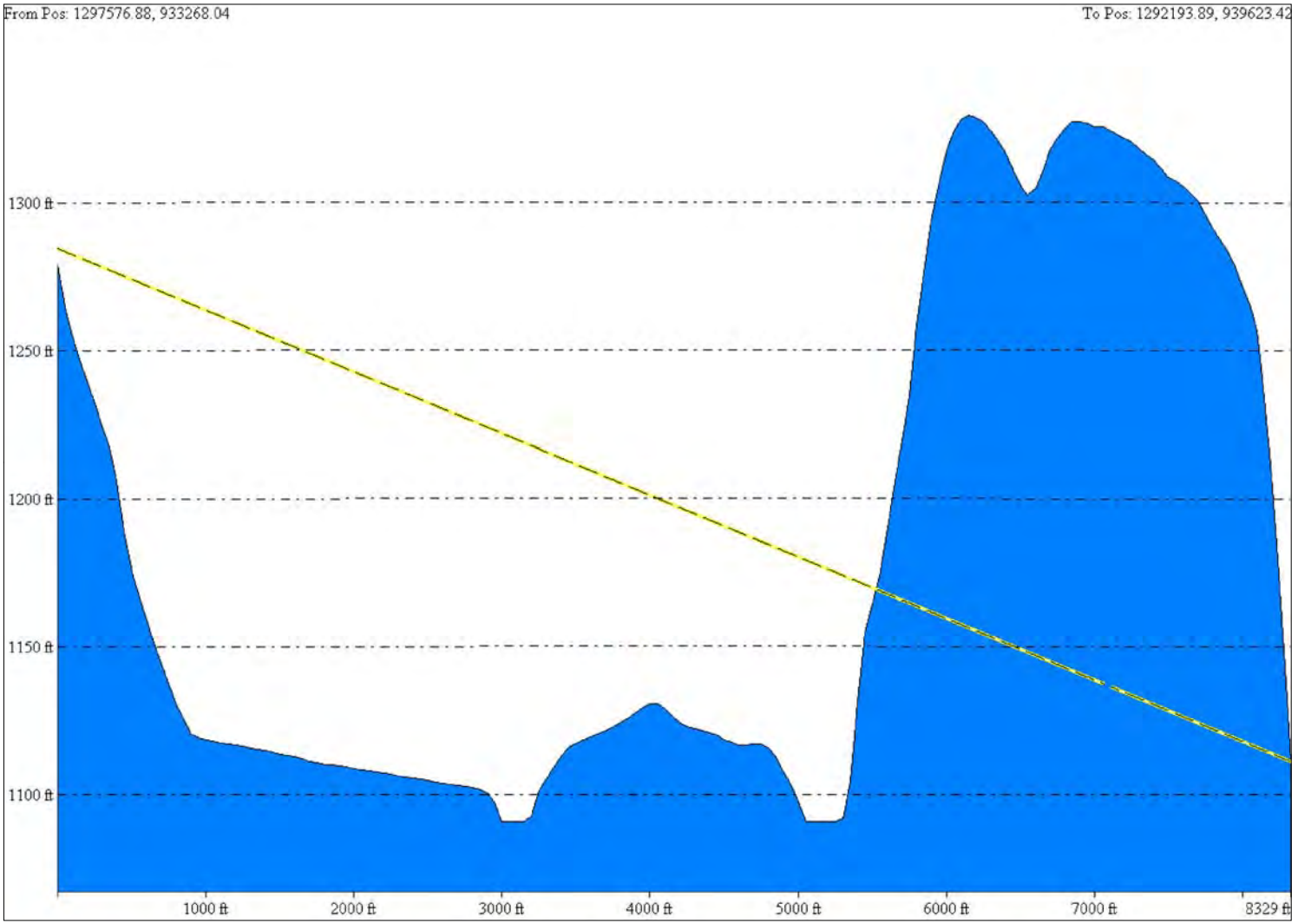
C&S COMPANIES®

F:\Projects\G34 - Modjeski & Masters\G34.001.001 - Letchworth Bridge DEIS\GIS\Projects\Figure_5.mxd

Figure 6

Line-of-Sight Cross Section

Visual Impact Assessment
Portageville Rail Bridge Replacement



Line-of-Sight from Portageville Rail Bridge (Point B) to edge of 1.5 mile radius (Point B')

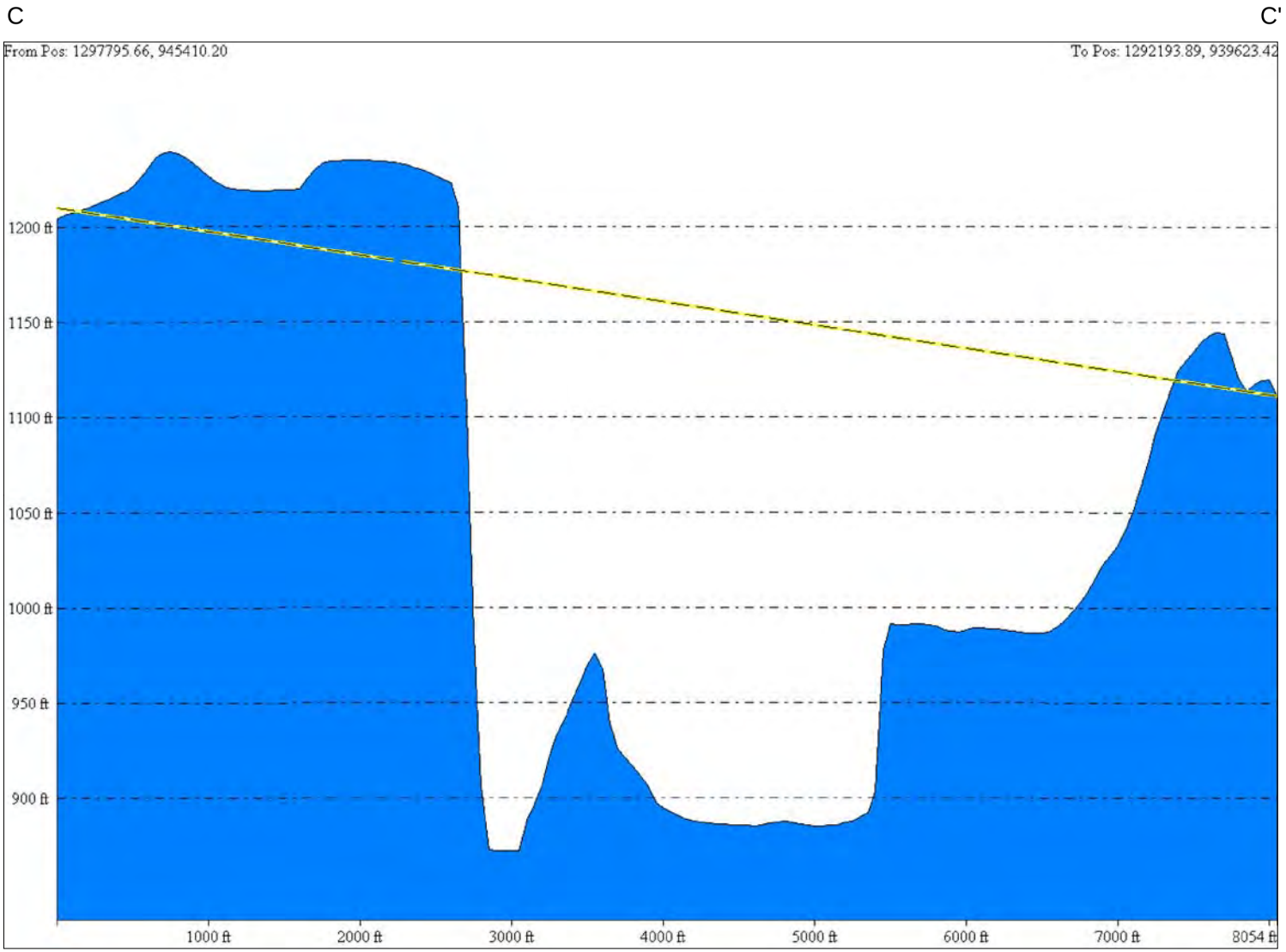
C&S COMPANIES®

F:\Projects\G34 - Modjeski & Masters\G34.001.001 - Letchworth Bridge DEIS\GIS\Projects\Figure_6.mxd

Figure 7

Line-of-Sight Cross Section

Visual Impact Assessment
Portageville Rail Bridge Replacement



Line-of-Sight from Portageville Rail Bridge (Point C) to edge of 1.5 mile radius (Point C')

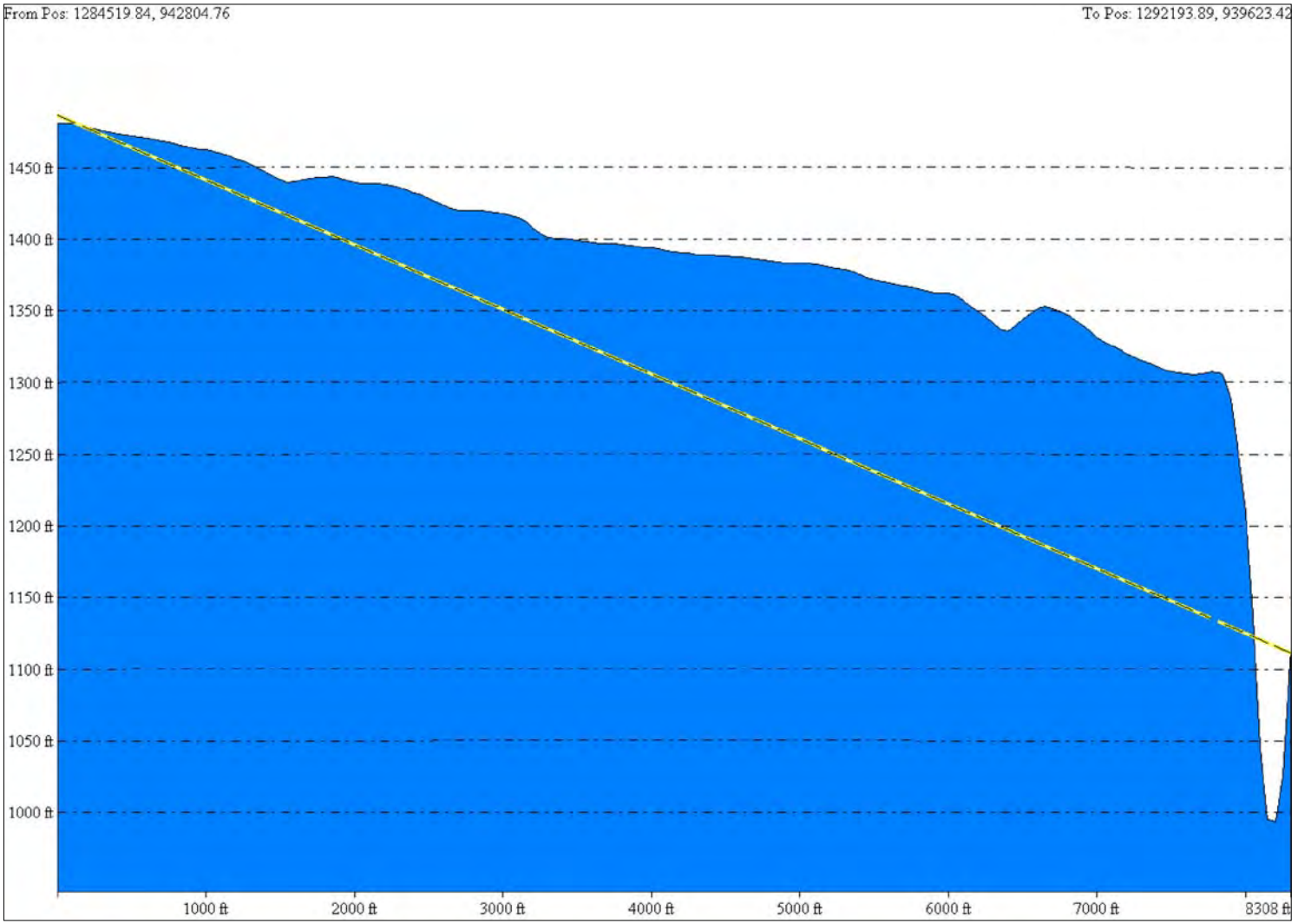
C&S COMPANIES®

F:\Projects\G34 - Modjeski & Masters\G34.001.001 - Letchworth Bridge DEIS\GIS\Projects\Figure_7.mxd

Figure 8

Line-of-Sight Cross Section

Visual Impact Assessment
Portageville Rail Bridge Replacement



Line-of-Sight from Portageville Rail Bridge (Point D) to edge of 1.5 mile radius (Point D')

C&S COMPANIES®

F:\Projects\G34 - Modjeski & Masters\G34.001.001 - Letchworth Bridge DEIS\GIS\Projects\Figure_8.mxd

Figure 9

Viewpoint Photo Locations
Visual Impact Assessment
Portageville Rail Bridge Replacement

Letchworth State Park Viewshed Photo Locations			
ID	Northing	Easting	Comment
1	934178.9507	1290331.0694	
2	934199.7940	1290421.0895	
3	935917.4461	1293123.9752	
4	936871.5669	1291678.3144	
5	942238.1717	1298300.5668	
6	942240.0908	1298272.2905	
7	942214.3496	1294899.1579	
8	942146.2795	1295024.1774	
9	942048.4097	1295145.6499	
10	941928.6112	1295073.4169	
11	940283.7500	1293441.0017	
12	940098.0832	1292918.7031	
13	940082.8574	1292843.9419	
14	940062.7933	1292765.7557	
15	940053.4249	1292720.3023	
16	939979.9241	1292572.4319	
17	939992.6285	1292487.6699	
18	939733.3209	1292316.3315	
19	939421.3725	1292156.4177	
20	939201.0058	1292019.0537	
21	939121.6925	1291980.2598	
22	938878.1018	1291915.4121	
23	938480.1588	1291938.0291	
24	940129.2465	1292255.6802	
25	940149.2910	1292267.3358	Viewpoint B
26	940170.2152	1292256.9104	
27	940416.9491	1292406.2266	Viewpoint C
28	940429.1398	1292490.8664	
29	940525.6822	1292726.4613	
30	940851.7413	1293105.7094	
31	941182.4007	1293413.8838	
32	941553.2543	1293711.6201	
33	941863.1595	1293915.3373	
34	941983.9808	1294095.7119	
35	942091.1026	1294147.8877	
36	941988.7409	1293910.6155	
37	939644.3888	1291716.4361	Viewpoint D
38	939913.2960	1291937.0696	
39	939942.5591	1291892.9076	
40	939903.8153	1291973.0154	
41	939879.4120	1291974.6094	
42	943650.4800	1296031.0940	Viewpoint A
43	943706.1070	1296116.3890	
Datum: NAD83, Stateplane, New York West, Feet			

Legend

- 1.5 Mile Radius
- Photo Location
- Viewpoint Location

N

0 — Feet — 3,000

C&S COMPANIES®

F:\Projects\G34 - Modjeski & Masters\G34.001.001 - Letchworth Bridge DES\GIS\Projects\Figure_9.mxd

Sources: USDA Geospatiaal Gateway

Figure 10 - Viewpoint A_Existing.jpg

Figure 11 - Viewpoint A_Existing and New Bridge.jpg

Figure 12 - Viewpoint A_New Bridge Only.jpg

Figure 13 - Viewpoint B_Existing.jpg

Figure 14 - Viewpoint B_Existing and New Bridge.jpg

Figure 15 - Viewpoint B_New Bridge Only.jpg

Figure 16 - Viewpoint C_Existing.jpg

Figure 17 - Viewpoint C_Existing and New Bridge.jpg

Figure 18 - Viewpoint C_New Bridge Only.jpg

Figure 19 - Viewpoint D_Existing.JPG

Figure 20 – Viewpoint D – Existing and New Bridge

Figure 21 – Viewpoint D – New Bridge Only

Appendix A.

NYSDEC Visual Policy

DEP-00-2

THE DEC POLICY SYSTEM

New York State
Department of Environmental Conservation

PROGRAM POLICY	Department ID: DEP-00-2	Program ID: n/a
Title: Assessing and Mitigating Visual Impacts		
Issuing Authority: Article 8, 49 Name: Jeffrey Sama Title: Director Signature: /s/ Date: 7/31/00 Issuance Date: 7/31/00	**Originating Unit: Division of Environmental Permits** Office/Division: Environmental Permits Unit: Phone: (518) 402-9167 Latest Review Date (Office Use):	

Abstract: Facilities regulated by the Department of Environmental Conservation located in visual proximity to sensitive land uses can produce significant visual impacts. This policy and guidance defines what visual and aesthetic impacts are, describes when a visual assessment is necessary and how to review a visual impact assessment, differentiates State and local concerns, and defines avoidance, mitigation and offset measures that eliminate, reduce, or compensate for negative visual effects. A glossary of terms is provided for reference.

I. Purpose

This memorandum provides direction to Department staff for evaluating visual and aesthetic impacts generated from proposed facilities. This guidance defines State regulatory concerns and separates them from local concerns. There is nothing in this program policy that eliminates or reduces the responsibility of an applicant to local agencies to address local visual or aesthetic concerns. In addition, this program policy does not relieve applicants from requirements of other State agencies, such as Department of State Coastal Zone Program or Department of Public Service. This guidance will also define important technical concepts and provide a mechanism for complying with the balancing provisions of the State Environmental Quality Review Act (SEQR) with respect to environmental aesthetics.

II. Background

An ever expanding body of research has demonstrated that environmental aesthetic values are shared among the general population. This research finds that such values are not idiosyncratic, random, or arbitrary. For example, millions of people visit Niagara Falls for our shared appreciation of its beauty.

Many places have been recognized for their beauty and designated through Federal or State democratic political processes, reinforcing the notion that environmental aesthetic values are shared. Recognition of aesthetic resources also occurs at local levels through zoning, planning or other public means. That these special places are formally recognized is a matter of public record. This guidance contains a

generic listing of all aesthetic resources of statewide significance and serves as the template from which aesthetic issues of State concern can be distinguished from local issues. Generally, it is staff's responsibility to identify and mitigate impacts to Federal and State designated aesthetic resources. With respect to local resources, Department staff should defer to local decision makers, who are likely to be more familiar with and best suited to address them.

III. Policy

In the review of an application for a permit, Department staff must evaluate the potential for adverse visual and aesthetic impacts on receptors outside of the facility or property. When a facility is potentially within the viewshed of a designated aesthetic resource, the Department will require a visual assessment, and in the case where significant impacts are identified, require the applicant to employ reasonable and necessary measures to either eliminate, mitigate or compensate for adverse aesthetic effects.

IV. Responsibility

The environmental analyst, acting as project manager, for review of a new application must assure that visual and aesthetic impacts are properly evaluated by the applicant. For new permits or significantly modified permits, staff must determine the potential significance of the action pursuant to SEQR.

In the review of an application for a permit, staff must evaluate the potential for adverse aesthetic impacts to sensitive places. Sensitive places of statewide concern are listed in this guidance (see V. Procedure). From the State's perspective there may be a significant impact if one or more of the listed places lies within the viewshed of a proposed project. From a local perspective there may be a significant impact if a local resource lies within the project's viewshed. This simple concept may help staff and decision makers distinguish local concerns from State concerns, and public concerns from individual expressions of concern.

With respect to aesthetics, an individual citizen's expression of concern is usually based on the belief that a property or particular "neighborhood" lies within the viewshed of a proposed project. This is different from the concerns of the public at large which has a stake in aesthetic resources recognized as having designated value under the public domain.

Significant impacts are identified and confirmed by staff during the review of an application. SEQR obligates the Department to mitigate such impacts to the maximum extent practicable [6NYCRR Part 617.11(d)(5)]. Local involved agencies must do the same with respect to local resources and likewise comply with Article 8 of the ECL and 6NYCCR Part 617. Impacts to aesthetic resources of statewide concern may require more substantial mitigation strategies to achieve project approval. Mitigation costs and practicality of the mitigative measures must be weighed in the balancing required by the State Environmental Quality Review Act.

Local resources are frequently designated through local zoning and planning processes. Accordingly, local jurisdictions may require additional and somewhat different information than the Department. The legislature has recently recognized and addressed this jurisdictional difference. In 1999, the Legislature, revised Article X of the Public Service Law to eliminate a DEC requirement to testify on behalf of local

jurisdictions concerning the impacts of power plant siting. In doing so, they explicitly eliminated the requirement that DEC staff testify with regard to local jurisdictional needs.

V. Procedure

Staff must assure that the full scope of visual and aesthetic concerns are addressed. This includes impacts from all project components and their operation on all inventoried resources. In addition, an equitable level of expectations between the potential significance of the impact, the degree of sophistication of the analysis required of applicant and appropriate level of mitigation strategies must be established. The goal of visual assessment is to reveal impacts and effective mitigation strategies. Small scale, low budget projects should not be burdened with the costs of sophisticated visual analyses. In these instances, it is generally more effective to reserve applicant investments for mitigation rather than complex visual assessments. Simple line-of-sight profiles may suffice for revealing impacts and potential mitigation strategies (see appendix A for an illustration of their use).

Staff must take certain basic steps to assure that visual concerns have been fully addressed in each application. Those steps are:

A. Verify the applicant's inventory of aesthetic resources.

B. Verify the applicant's visual assessment, using either graphic viewshed and line-of-sight profile analysis as illustrated in Appendix A, or more sophisticated visual simulations and digital viewshed analysis, as needed.

C. Determine or verify the applicant's assessment of the potential significance of the impact.

D. Confirm that applicant's mitigation strategies are reasonable and are likely to be effective, or assure mitigation by requiring the applicant to submit a design that includes the required mitigation, or, impose permit conditions consistent with those mitigation requirements.

A discussion of each follows:

A. Inventory of Aesthetic Resources.

It is important to note that all significant scenic and aesthetic resources may not have yet been designated in New York State. However, for the purposes of this policy all aesthetic resources of statewide significance may be derived from one or more of the following categories:

1) A property on or eligible for inclusion in the National or State Register of Historic Places [16 U.S.C. § 470a et seq., Parks, Recreation and Historic Preservation Law Section 14.07]; e.g. Trinity Church in Manhattan, Schuyler Mansion in Albany;

2) State Parks [Parks, Recreation and Historic Preservation Law Section 3.09]; e.g. Grafton Lakes State Park, Rensselaer County;

3) Urban Cultural Parks [Parks, Recreation and Historic Preservation Law Section 35.15];

4) The State Forest Preserve [NYS Constitution Article XIV]; Adirondack and Catskill Parks;

5) National Wildlife Refuges [16 U.S.C. 668dd], State Game Refuges and State Wildlife Management Areas [ECL 11-2105]; e.g. Montezuma National Wildlife refuge; Perch River Wildlife Management Area, Jefferson County;

6) National Natural Landmarks [36 CFR Part 62]; e.g. Iona Island Marsh, Hudson River, Rockland County;

7) The National Park System, Recreation Areas, Seashores, Forests [16 U.S.C. 1c]; e.g. Gateway National Recreation Area, Staten Island; Finger Lakes National Forest, Schuyler County;

8) Rivers designated as National or State Wild, Scenic or Recreational [16 U.S.C. Chapter 28, ECL 15-2701 et seq.]; e.g.Cedar River (Wild), Ampersand Brook (Scenic); West Branch of the Ausable River (Recreational);

9) A site, area, lake, reservoir or highway designated or eligible for designation as scenic [ECL Article 49 or DOT equivalent and APA.Designated State Highway Roadside; e.g. Storm King Highway (Article 49 Scenic Road), Rockland county;

10) Scenic Areas of Statewide Significance [of Article 42 of Executive Law][1]; e.g. Catskill-Olana SASS;

11) A State or federally designated trail, or one proposed for designation [16 U.S.C. Chapter 27 or equivalent]; e.g. Appalachian Trail;

12) Adirondack Park Scenic Vistas; [Adirondack Park Land Use and Development Map]

13) State Nature and Historic Preserve Areas; [Section 4 of Article XIV of the State Constitution];

14) Palisades Park; [Palisades Interstate Park Commission]; e.g. Harriman State Park;

15) Bond Act Properties purchased under Exceptional Scenic Beauty or Open Space category; e.g. Star Hill, Oneida County.

Note: The Hudson River has recently been designated an "American Heritage River" by a Presidential Order under [PL 91-190]. The details and criteria of the program as they may relate to this policy are currently under review.

B. <u>Visual Assessments.</u>

[1] State Coastal Policies number 24 and 25 derived in part from Section 912 of Article 42 of the Executive Law define the criteria that, when properly employed, assure project consistency with coastal zone management objectives. Such policies are consistent with the review mechanisms contained in this DEC policy. Also for reference is the July 1993 DOS SASS publication for Columbia-Greene, Catskill-Olana, Estates District, Ulster North, Esopus-Lloyd, and the Hudson Highlands.

In all visual assessments, significant resources must be identified along with any potential adverse effects on those resources from the proposed project. If, in staff's judgement, a place designated in any of the above categories may lie in the viewshed of the proposed project then a visual assessment should be required to confirm or refute this potential. At a minimum a line-of-sight-profile, or, depending upon the scope and potential significance of the activity, a digital viewshed may be used to determine if a significant property is within the potential viewshed of the proposed project (see the Appendix A attached for guidance on how to construct and use a line-of-sight profile). Staff must then review the applicant's visual assessment for adequacy, accuracy and thoroughness. The control points (see glossary for definition) must be established by staff and should include a worst case scenario. Worst case here means establishing the control points that reveal any project visibility at an aesthetically significant place. Most of the time, though not always, high points reveal worst case. For example, the tallest facility component (e.g. combustion exhaust stack), may be the control point at the project end of the profile, while a high point of ground upon which the observer stands within a State Park may be the control point at the resource end of the profile.

With respect to determining the radius of the impact area to be analyzed, there has been a general guideline for large actions that it is usually "safe" to use 5 miles. The 5 mile distance probably owes its origins to the U.S. Forest Service "distance zones" set forth in their landscape management journal written in 1973[2] (5 miles is still largely considered "background," i.e. distances at which most activities are not a point of interest to the casual observer). However, for very large activities, such as power plants (particularly those that generate wet cooling tower plumes), and large landscape alterations, greater distances have been shown to be important in some landscape settings, and must be considered. In those instances, applicants must document to the satisfaction of staff that impacts beyond five miles to listed resources have been considered. They must also provide a clear demonstration that impact to any resource of statewide concern is insignificant. Such demonstrations may be convincing if resource inventories beyond 5 miles are coupled with line-of-sight profiles (see Appendix A for a complete discussion of these graphic tools) or other accepted visual criteria, such as computer simulations, analogous comparative studies or worst case presentations.

C. Significance.

Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Significant aesthetic impacts are those that may cause a diminishment of the public enjoyment and appreciation of an inventoried resource, or one that impairs the character or quality of such a place. Proposed large facilities by themselves should not be a trigger for a declaration of significance. Instead, a project by virtue of its siting in visual proximity to an inventoried resource may lead staff to conclude that there may be a significant impact. For example, a cooling tower plume may drift between viewers standing on an overlook at a State Park thereby blocking the view of the panorama. Staff must verify the potential significance of the impact using the qualities of the resource and the juxtaposition (using viewshed and or line-of-sight profiles) of the proposal as the guide for the determination.

D. Mitigation.

[2] U.S. Forest Service, Agricultural Handbook Number 434, Feb. 1973

Mitigation may reduce or eliminate the visibility of the project or alter the project's effect on the scenic or aesthetic resource in some way. It is usually easier to deal with the visibility of the project than its composition to achieve mitigation. Altering the composition of a project lies within the realm of professional designers. When given the opportunity, however, staff should encourage applicants to design aesthetically compatible projects that incorporate environmentally friendly design principles and components, as may be employed from the mitigation menu below.

Mitigation strategies can be categorized into three general groups as outlined below.

1) Professional Design and Siting.
    a) Screening
    b) Relocation
    c) Camouflage/Disguise
    d) Low Profile
    e) Downsizing
    f) Alternate Technologies
    g) Non-specular materials
    f) Lighting

2) Maintenance
    a) Decommissioning

3) Offsets

A discussion of each follows:

1. Professional Design and Siting. A properly sited and designed project is the best way to mitigate potential impacts. Under optimum circumstances a project can be sited in a location which precludes the possibility of having an aesthetic resource within its viewshed. Also, through sensitive design treatment, elements of particular concern may be sited or dimensioned in a way that reduces or eliminates impacts on significant resources. Sometimes circumstances prevent the realization of optimal siting and sometimes engineering, economic or other constraints preclude optimum dimensioning or other appropriate design treatments. Under those circumstances, other mitigation strategies should be considered.

Staff should assure effective mitigation is thoroughly explored by requiring project sponsors to consider the following tools to mitigate impacts:

a. Screening. Screens are objects that conceal other objects from view. They may be constructed of soil, rocks, bricks, or almost anything opaque. Vegetation can, despite its visual porosity, function as a screen when a sufficient mass is employed. Screens may be natural, e.g. vegetation, or artificial, e.g. fences and walls. Screens may appear natural e.g. wood, stone, or may appear artificial, e.g. plastic, metal. In natural settings it is generally better to employ natural materials, while in urban places designers may employ a broader range of materials.

Screens constructed from soil are called berms. Berms may appear natural e.g. blend with nearby topography, or appear artificial e.g. geometrical or symmetrical shape. Each

may be employed depending upon the overall design intent. Berms may be vegetated or not vegetated depending upon their particular function, e.g. spill containment and/or screening.

Properly sized and placed screens may completely conceal an object, while improperly sized and placed screens may fail to conceal. Screens may block desirable views when improperly placed (see Appendix A to see how screen placement is important).

Screens are not necessarily buffers and buffers are not necessarily screens. A buffer may attenuate noise, soften a landscape or provide other functions that may or may not include screening.

Screens possess line, form, texture, planes and color, and therefore, have their own aesthetic qualities. At times, they may be more impacting than the object to be concealed. Screens may draw attention to the object to be concealed. Screens may physically connect two similar or dissimilar areas.

b. Relocation. A facility component may be relocated to another place within the site to take advantage of the mitigating effects of topography and vegetation.

c. Camouflage/Disguise. Colors and patterns of color may conceal an object or its identity. Disguise may take many forms, and is limited only by the imagination of the project designers. As an example, communication towers can be disguised as trees, flagploles, barn silos, church steeples, or any other "in-character" structure depending upon circumstances.

d. Low Profile. Reducing the height of an object reduces its viewshed area.

e. Downsizing. Reducing the number, area or density of objects may reduce impacts.

f. Alternate Technologies. Substituting one technology for another may reduce impacts (e.g. dry cooling tower technology versus wet cooling tower technology).

g. Non-Specular Materials. Using building materials that do not shine may reduce visual impacts.

h. Lighting. With respect to regional issues, such as a tall combustion exhaust stack or radio tower, the Federal Aviation Administration (FAA) requires certain lighting for public transportation safety. These impacts may be considered unavoidable unless lower profiles can be achieved. Applicants should also document that they have consulted with and met all applicable lighting standards under local jurisdiction. Consideration should be given to off-site light migration, glare and "sky glow" light pollution. Lighting requirements, through best engineering practices, should not exceed the functional requirements of the project.

2. Maintenance. How a landscape and structures in the landscape are maintained has aesthetic implications. "Eyesores" result from neglect. This should be part of any mitigation strategy.

a. Decommissioning. Removing an object from the landscape after its useful life is over, reduces the duration of a visual impact (see page 9 for further discussion).

3. Offsets. Correction of an existing aesthetic problem identified within the viewshed of a proposed project may qualify as an offset or compensation for project impacts. A decline in the landscape quality associated with a proposed project can, at least partially, be "offset" by the correction. In some circumstances a net improvement may be realized (see page 9 for further discussion).

An applicant may assert that all economic and effective mitigation strategies have been incorporated into the proposed design and, when properly designed, such self-imposed mitigation should effectively mitigate any negative effects on a listed resource. However, if staff concludes that significant impacts remain then staff must still ensure that impacts are minimized. In this regard, staff should first investigate visibility mitigation strategies. Manipulating design elements to achieve adequate mitigation usually lies within the purview of professional designers.

Staff should not try to judge the quality of a design nor its effect on the aesthetics of the listed resource unless they are qualified to do so. Such qualifications normally include academic or other accepted credentials in architecture or landscape architecture. Nevertheless, it is the burden of the applicant to provide clear and convincing evidence that the proposed design does not diminish the public enjoyment and appreciation of the qualities of the listed aesthetic resource. Staff can and should review the strength or merit of such proof. An applicant's mere assertion that the design is in harmony with or does not diminish the values of the listed resource is insufficient for the purposes of reaching findings. Instead, an applicant must demonstrate through evidence provided by others e.g. recognized architectural review boards, comparative studies that are clearly analogous, or other similar techniques, that the public's enjoyment and appreciation of the qualities of the aesthetic resource are not compromised.

Staff must be assured that consistent with social, economic and other essential considerations, the action is one that avoids or minimizes adverse impacts to the maximum extent practicable. This can be accomplished by asking and responding affirmatively to the following questions.

1) Was the full mitigation menu considered?

2) Will those mitigation strategies selected be effective?

3) Were the costs of mitigation for impacts to other media considered and were those mitigation investments prioritized accordingly?

4) Are the estimated costs of all mitigation insignificant (for example, are the costs of visual mitigation taken together with all other mitigation less than10% of the total project cost?)

5) Were the mitigation strategies employed consistent with previous similar applications? If not, was the reasoning for any changes reasonable and justified?

6) Was the mitigation cost effective? For example, if fully mature vegetation with an immediate screening effect costs 10 times the amount that less mature vegetation would cost, is it appropriate to require the less costly option if its full screening effect can be realized in just, say, 3 years? (See Appendix A for details concerning this subject).

7) Were offsets and decommissioning considered?

It is important to bring the project sponsor into the discussion of mitigation strategies. If more than one mitigation strategy meets all environmental protection needs, the applicant's needs and preferences should be considered.

It is preferred that all mitigation options selected be specified in the applicant's plans for Department review. The plans should sufficiently depict readily understandable and enforceable details. Adherence to such plans should then become a permit condition. During and after facility construction, staff should visit the site and ensure that all mitigation strategies detailed in the plans and specifications have been adequately incorporated into the facility design.

If all mitigation options available from the menu are considered, applied where appropriate, and those applied are cost effective, then one can assert that impacts have been minimized to the maximum extent practicable. However, the residual impact after all such strategies have been employed may still be significant. Offsets should then be considered to help achieve the balancing required of SEQR. Finally, decommissioning options may be considered that reduce the duration of impacts for projects with severe residual impacts. A discussion of each follows:

1. Offsets.

Offsets should be employed in sensitive locations where significant impacts from the proposal are unavoidable, or mitigation of other types would be uneconomic and mitigation to be used is only partially effective. Offsets should be employed when significant improvement can be expected at reasonable cost. An example of an offset might be the removal of an existing abandoned structure that is in disrepair (i.e. an "eyesore") to offset impacts from a proposal within visual proximity to the same sensitive resource.

2. Decommissioning.

Decommissioning may take many forms, and other disciplines in Department program areas may have an interest in decommissioning. However, from the perspective of aesthetics, three are of most significance: 1) the total removal from the site of all facility components and restoration to an acceptable condition, usually with attendant revegetation; 2) partial removal of facility components, such as elimination of visually impacting structures; and 3) conditions designed to maintain an abandoned facility and site in an acceptable condition that precludes "eyesores"or site and structural deterioration. Applicants should provide such plans when deemed necessary.

Glossary

Aesthetic impact: Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Mere visibility, even startling visibility of a project proposal, should not be a threshold for decision making. Instead a project, by virtue of its visibility, must clearly interfere with or reduce the public's enjoyment and/or appreciation of the appearance of an inventoried resource (e.g. cooling tower plume blocks a view from a State Park overlook).

Aesthetically significant place: A formally designated place visited by recreationists and others for the express purpose of enjoying its beauty. For example, millions of people visit Niagara Falls on an annual basis. They come from around the country and even from around the world. By these measurements,

one can make the case that Niagara Falls (a designated State Park) is an aesthetic resource of national significance. Similarly, a resource that is visited by large numbers who come from across the state probably has statewide significance. A place visited primarily by people whose place of origin is local generally is generally of local significance. Unvisited places either have no significance or are "no trespass" places.

Aesthetic Quality: There is a difference between the quality of a resource and its significance level. The quality of the resource has to do with its component parts and their arrangement. The arrangement of the component parts is referred to as composition. The quality of the resource and the significance level are generally, though not always, correlated.

Atmospheric perspective: Even on the clearest of days, the sky is not entirely transparent because of the presence of atmospheric particulate matter. The light scattering effect of these particles causes atmospheric or aerial perspective, the second important form of perspective. In this form of perspective there is a reduction in the intensity of colors and the contrast between light and dark as the distance of objects from the observer increases. Contrast depends upon the position of the sun and the reflectance of the object, among other items. The net effect is that objects appear "washed out" over great distances.

Control Points: The two end points of a line-of-sight. One end is always the elevation of an observer's eyes at a place of interest (e.g. a high point in a State Park) and the other end is always an elevation of a project component of interest (e.g. top of a stack of a combustion facility or the finished grade of a landfill).

Line-of-sight profile: A profile is a graphic depiction of the depressions and elevations one would encounter walking along a straight path between two selected locations. A straight line depicting the path of light received by the eye of an imaginary viewer standing on the path and looking towards a predetermined spot along that path constitutes a line-of-sight. The locations along the path where the viewer stands and looks are the control points of the line-of- sight profile.

Scientific Perspective: Scientific, linear, or size perspective is the reduction in the apparent size of objects as the distance from the observer increases. An object appears smaller and smaller as an observer moves further and further from it. At some distance, depending upon the size and degree of contrast between the object and its surroundings, the object may not be a point of interest for most people. At this hypothetical distance it can be argued that the object has little impact on the composition of the landscape of which it is a tiny part. Eventually, at even greater distances, the human eye is incapable of seeing the object at all.

Viewshed: A map that shows the geographic area from which a proposed action may be seen is a viewshed.

Visual Assessments: Analytical techniques that employ viewsheds, and/or line-of-sight profiles, and descriptions of aesthetic resources, to determine the impact of development upon aesthetic resources; and potential mitigation strategies to avoid, eliminate or reduce impacts on those resources.

Visual impact: Visual impact occurs when the mitigating effects of perspective do not reduce the visibility of an object to insignificant levels. Beauty plays no role in this concept. A visual impact may also be considered in the context of contrast. For instance, all other things being equal, a blue object

seen against an orange background has greater visual impact than a blue object seen against the same colored blue background. Again, beauty plays no role in this concept.

APPENDIX A

SCREENS

THE RELATIONSHIP BETWEEN SCIENTIFIC PERSPECTIVE AND A LINE OF SIGHT PROFILE.

Scientific or linear perspective is a geometric procedure that projects space onto a plane. This technique provides the analyst with a simplified way to verify the effectiveness of applicants mitigation proposal.

USE THE DIAGRAM BELOW TO ANSWER THESE SAMPLE QUESTIONS

Q: At what height should a screen be constructed to completely conceal a 23 foot object from an observer standing 80 feet from the object?
Constraint: Screen must be located 10 feet inside property line.

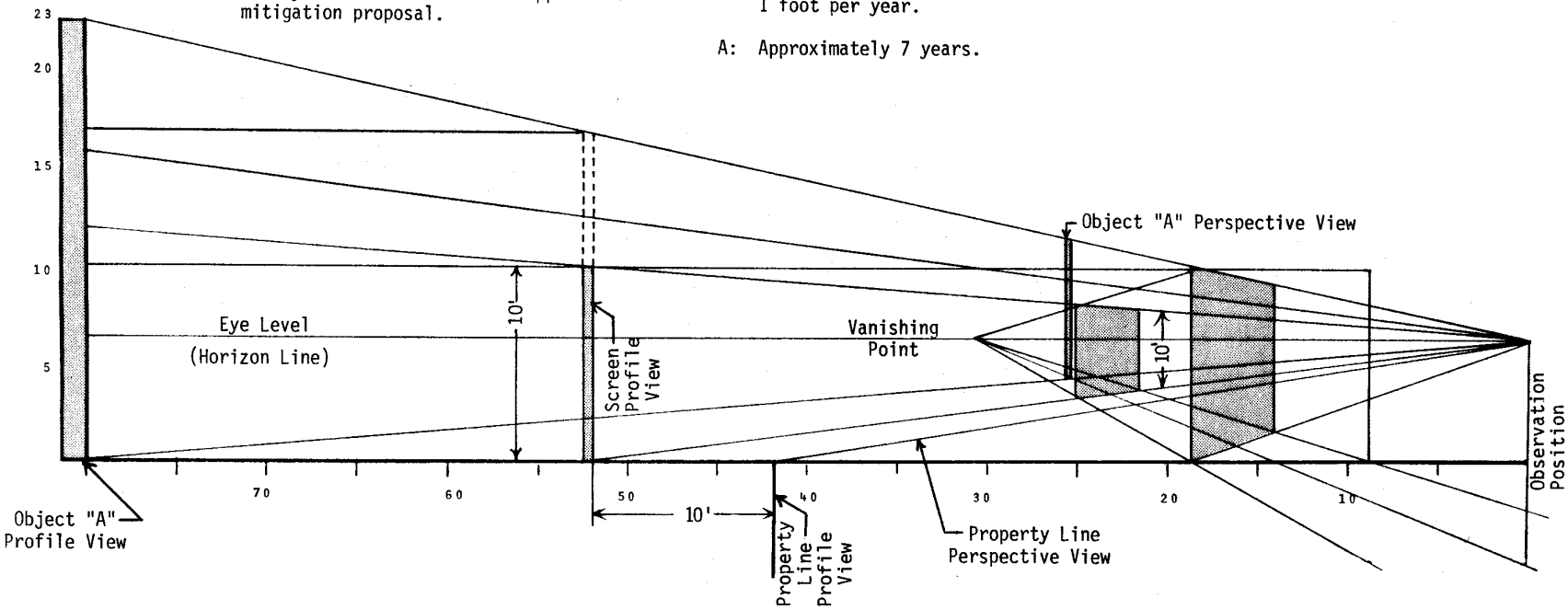
A: About 17 feet.

Q: What is the maximum height of an object to be concealed behind a 10 foot screen that is located 80 feet from an observer?
Constraint: The observer is standing about 18½ feet behind the screen.

A: About 23 feet.

Q: In approximately how many years would a vegetative screen 6 feet in height planted on a berm 4 feet in height completely conceal a 23 foot object?
Constraints: Berm must be located 10 feet inside property line; object is 80 feet from observer; expected vegetation growth rate of approximately 1 foot per year.

A: Approximately 7 years.

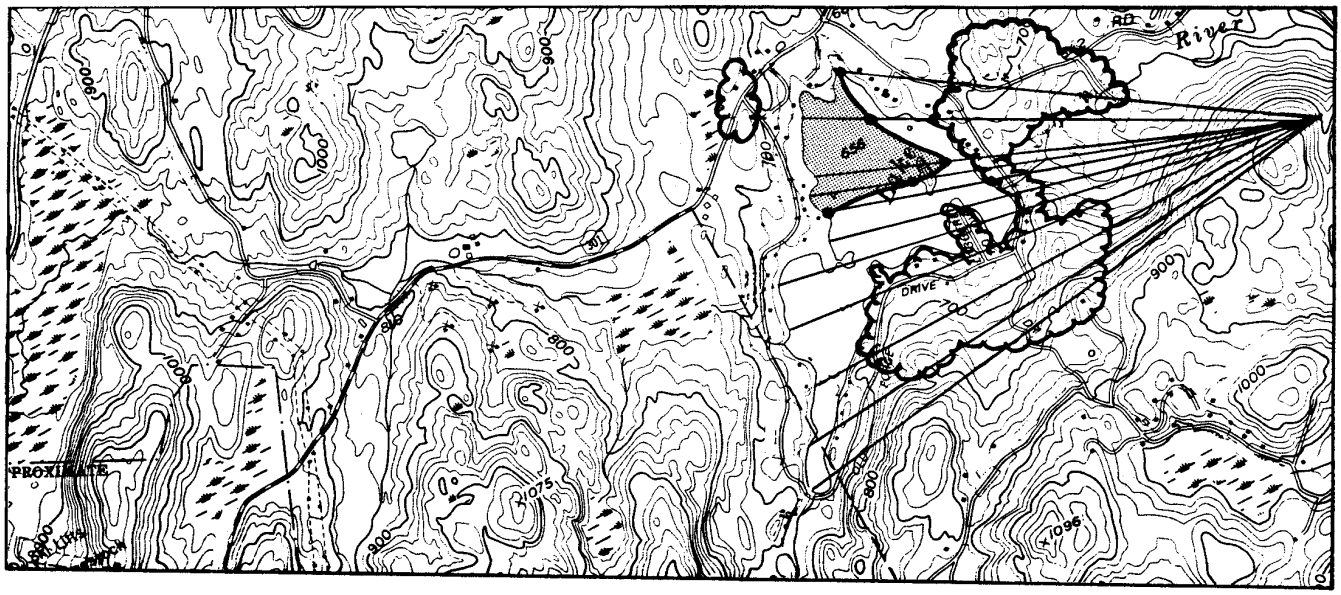


VIEWSHEDS

For illustrative purposes only, a "partial" viewshed has been constructed below. A partial viewshed is distinguished from a full viewshed in that it only shows a selected area from which an object may be seen. A full viewshed shows all such areas.

The shaded area in the northwest corner of the lake is the only area within the lake that a hypothetical object 100 feet in height and situated at A (where the profile radii converge) may be seen.

The defined viewing area has been constructed by connecting each point along each profile where a viewer just begins to see the hypothetical object. To add realism to the viewshed, 40' vegetation has been factored into the lines of sight. The vegetation alters the viewing angle and hence the initial viewpoint indicated by the large black dots at the intersection of the shaded area with each profile radii.



LEGEND

VIEWSHED
(Area within lake from which a hypothetical 100 foot object located at "A" may be seen)

N

SCALE 1" = 2,000'

PROFILES

To construct a profile, first position the graph paper parallel and contiguous to the horizontal alignment of the desired profile (indicated by line A-B). Proceed by extending vertical lines (indicated by dashed lines) to the correct height according to any selected convenient vertical scale (in this case 1" = 100'). This must be done from each spot where the horizontal alignment crosses a contour line. It is the elevation of the intersected contour that determines the height of each vertical line. Then, simply connect the top of each vertical line to form the profile (indicated by line C-D). The profile C-D depicts the depressions and elevations one would encounter walking a straight path from Point A to B on the plan map. To add realism add vegetation at the proper locations at the proper height (in this case 40').

Sample Questions and Answers

According to the profile:

Q. Can an observer at location "Z" see the east shore of the lake?

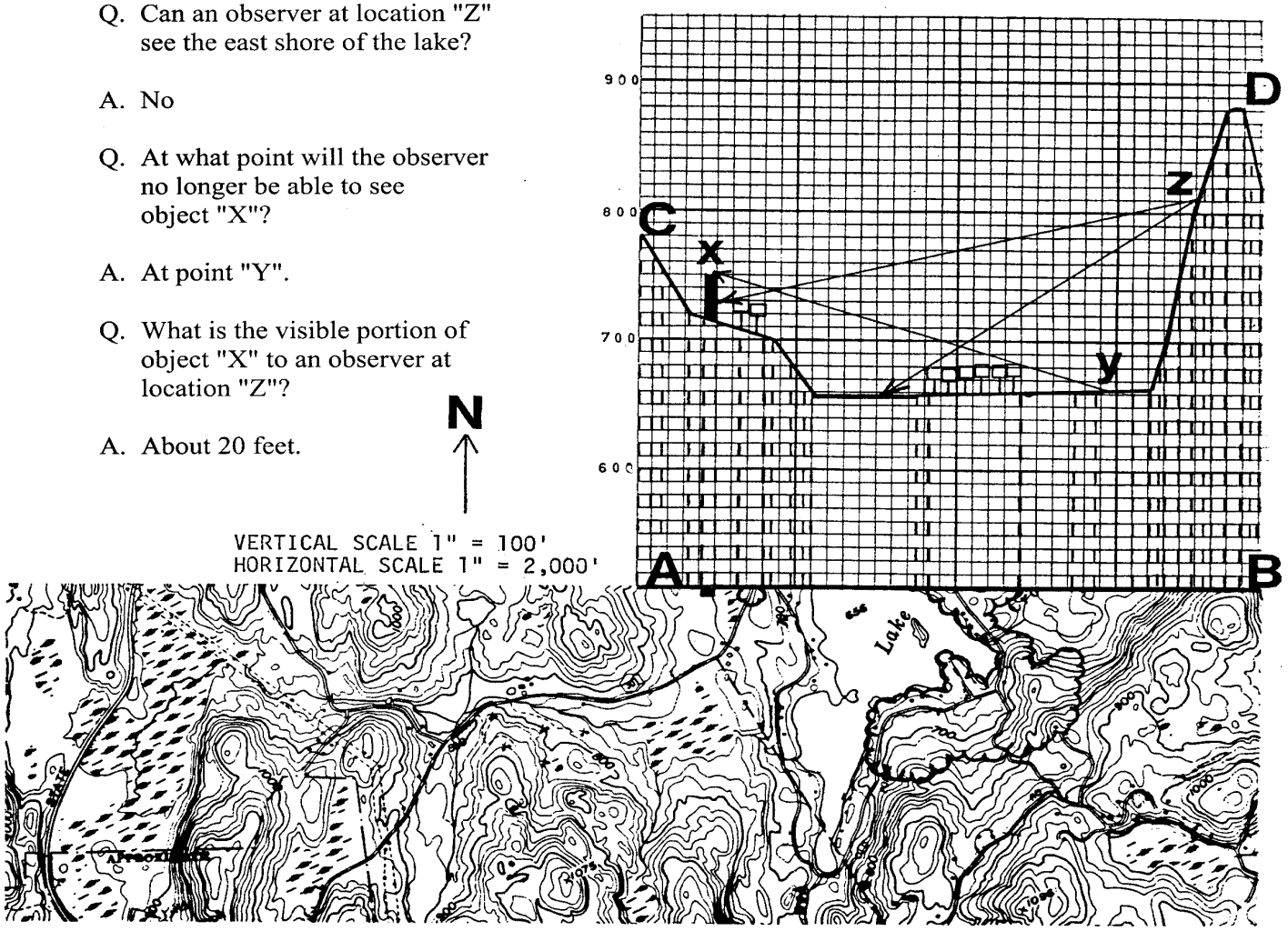
A. No

Q. At what point will the observer no longer be able to see object "X"?

A. At point "Y".

Q. What is the visible portion of object "X" to an observer at location "Z"?

A. About 20 feet.



Appendix B.

Photo Log

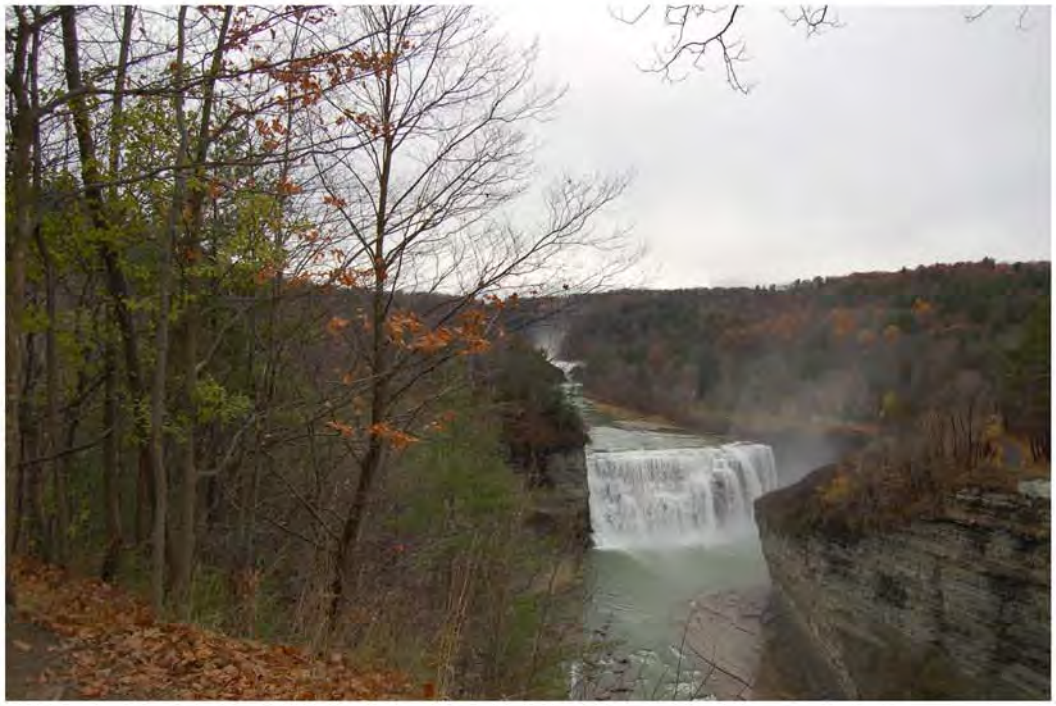
DSC_0003.JPG

DSC_0004.JPG

DSC_0005.JPG

DSC_0006.JPG

DSC_0007.JPG



DSC_0008.JPG

DSC_0009.JPG

DSC_0010.JPG

DSC_0011.JPG

DSC_0012.JPG

DSC_0013.JPG

DSC_0014.JPG

DSC_0015.JPG

DSC_0016.JPG

DSC_0017.JPG

DSC_0018.JPG

DSC_0019.JPG

DSC_0020.JPG

DSC_0021.JPG

DSC_0022.JPG

DSC_0023.JPG

DSC_0024.JPG

DSC_0025.JPG

DSC_0026.JPG

DSC_0027.JPG

DSC_0028.JPG

DSC_0029.JPG

DSC_0030.JPG

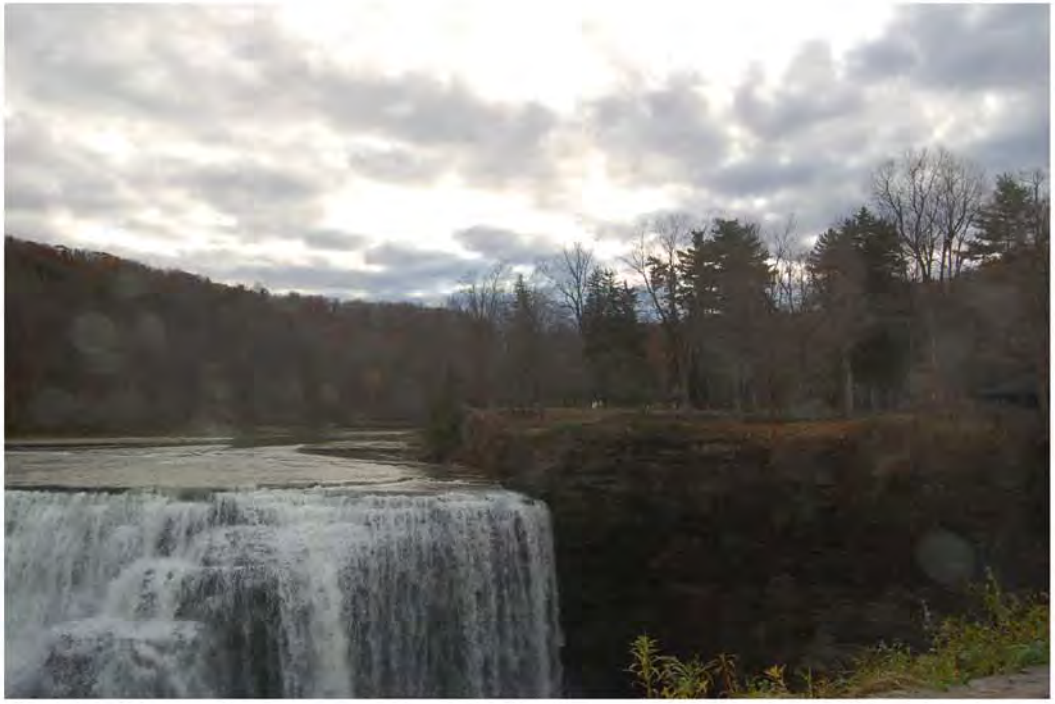
DSC_0031.JPG

DSC_0032.JPG

DSC_0033.JPG

DSC_0034.JPG

DSC_0035.JPG



DSC_0036.JPG

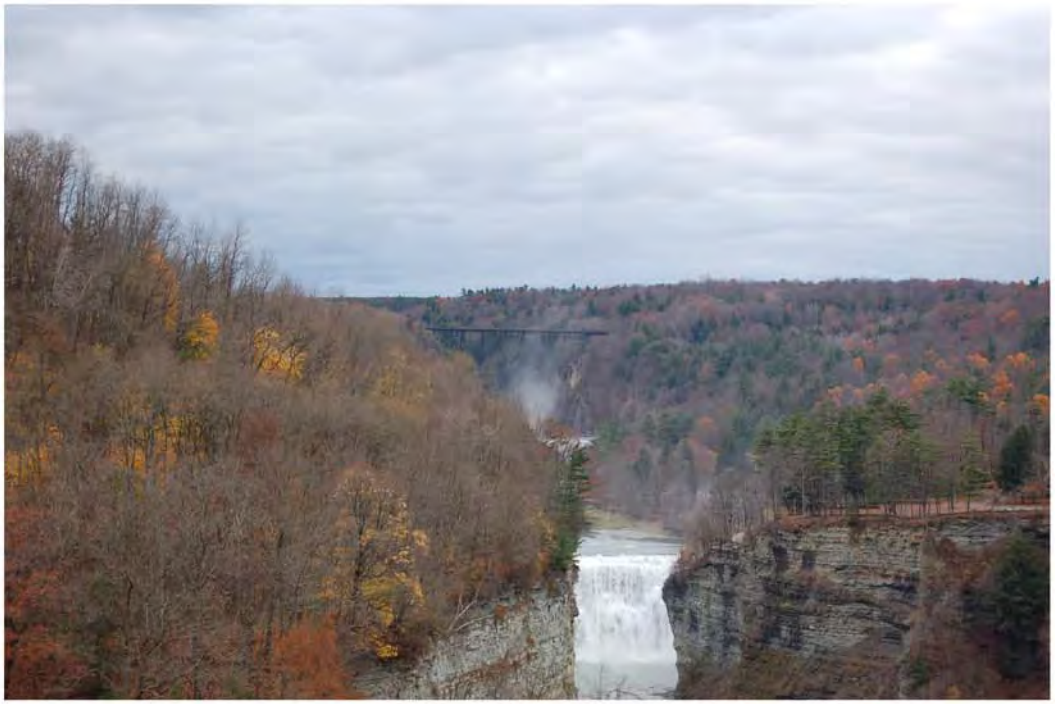
DSC_0037.JPG

DSC_0038.JPG

DSC_0039.JPG

DSC_0040.JPG

DSC_0041.JPG



DSC_0042.JPG

DSC_0043.JPG

DSC_0044.JPG

DSC_0045.JPG

DSC_0046.JPG

DSC_0047.JPG

DSC_0048.JPG

Appendix C.

Viewpoint Field Log Sheets

VIEWPOINT FIELD LOG SHEET

Project: **Portageville Bridge**
Date: 11/4/09
Weather: Overcast

VP#	GPS#	Photo#	Time	Visibility	Location/Comments
1	1	DSC 0003	11:[illegible]30	NO	Portageville Cemetary - E. Koy Road
2	2	0004	11:32	NO	" " "
3	3	0005		NO	E. Koy / 436 intersection
4	N/A	0006		NO	Portageville park entrance @ 19A/436 - north/west side
5	4	0007		NO	Portage Trail trailhead
6	5	8		YES	Overlook off of Finger Lakes Trail - east side
7	6	9		YES	" " " " "
8	7	10		YES	Off FLT, SIGN: "DANGER SLIDE AREA KEEP OFF"
9	8	11		YES	On FLT
10	9	12		NO	On FLT
11	10	13		NO	On FLT
12	11	14		NO	On FLT
13	12	15		YES	On FLT
14	13	16		YES	On FLT
15	14	17		YES	On FLT
16	15	18		YES	On FLT (Poor satellite reception)
17	16	19		YES	Overlook off of FLT, east side
18	17	20		YES	Below bridge on FLT, north east side, looking toward west abutment
19	18	21		YES	Below bridge on FLT, southeast side, looking toward west pier
20	19	22		YES	On FLT, eye level looking north under bridge
21	20	23		YES	" " looking NW @ west pier
22	21	24		YES	On FLT looking N @ bridge
23	22	25		NO	" " " " " (no longer visible)
24	23	26		Y	On Gorge Trail @ overlook looking south (closest) *
25	24	27		Y	" " " " " " *
26	25	28		Y	" " " " " " *
27	26	29		Y	" " " " " " *
28	27	30		Y	" " " " " " (medium dist)
29	28	31		Y	" " " " " " ↓ ↓
30	29	32		Y	" " " " " " (@ binoculars)

VIEWPOINT FIELD LOG SHEET

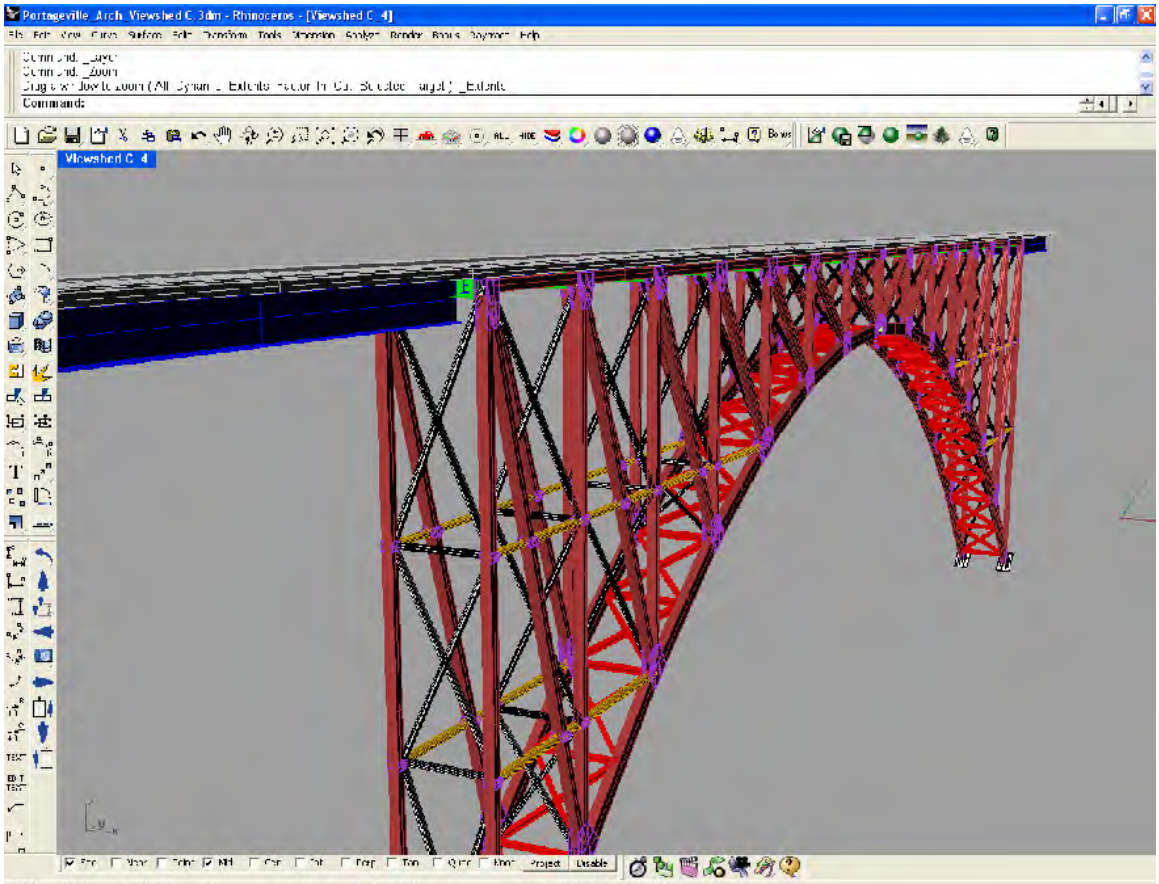
Project: **Portageville Bridge** Sheet 2 of 2
Date: 11/4/09
Weather: Overcast

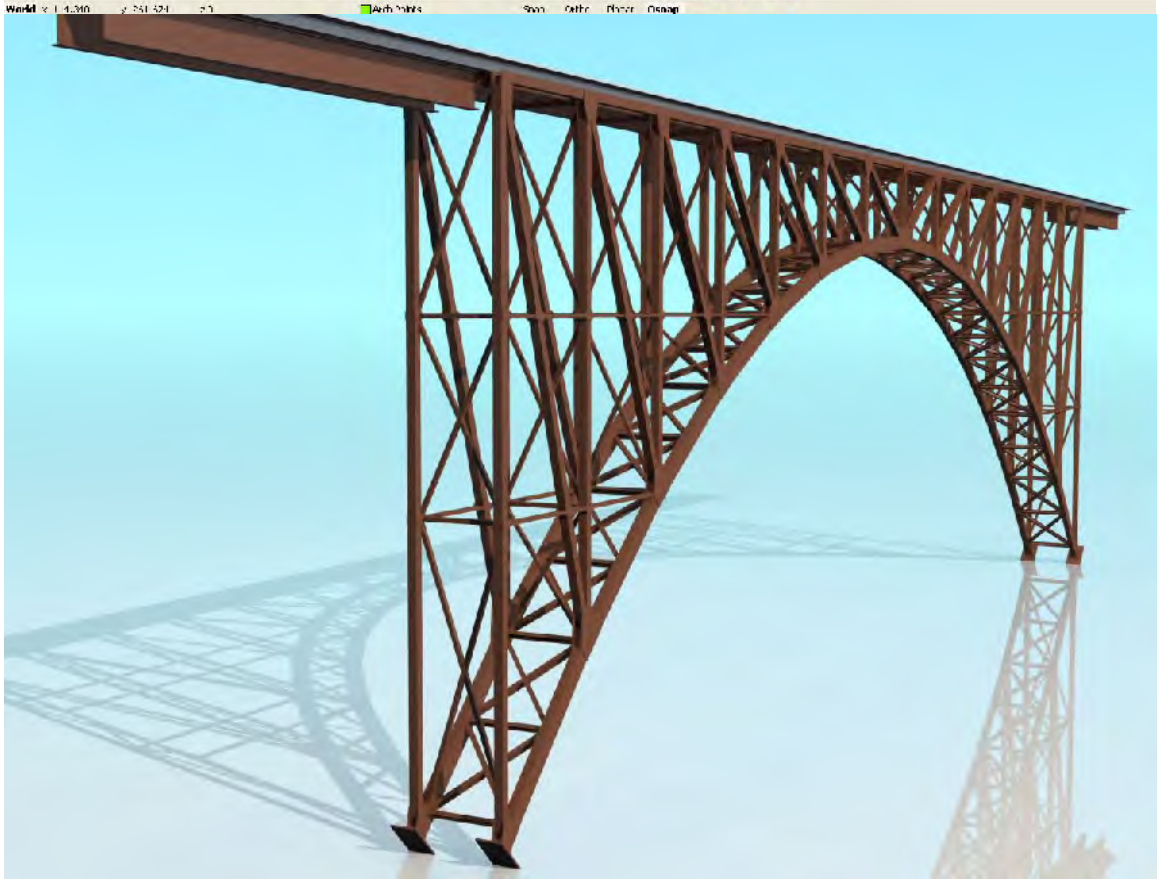
VP#	GPS#	Photo#	Time	Visibility	Location/Comments
31	30	OSC0033		Yes	Picnic area near parking area, Trail #1
32	31	34		Yes	On Trail #1, North end of parking area
33	32	35		No	" " " Stone wall near steps
34	33	36		Yes	Over look by Middle Falls
35	34	37		Yes	Bottom of steps north of Middle Falls overlook
36	35	38		Yes	Top of north stone steps, Glen Iris lawn area
37	36	39		Yes	Overlook in front of Glen Iris Inn
38	~~37~~	40		Yes	Inspiration Point - right of pond, landscape *
39	~~38~~	41		Yes	" " " " portrait *
40	~~39~~	42		Yes	" " left " " , landscape *
41	~~40~~	43		Yes	" " " " " , portrait *
42		44		Yes	South side on Park Rd looking North @ bridge pkg. area *
43		45		Yes	North " " " " " *
44		46		Yes	" " " " " East
45		47		Yes	" " " " " South
46		48		Yes	" " " " " East (at east end of bridge)

Appendix D.

three dimensional Bridge Model Images

Portageville Bridge
VIA – Viewpoint Simulation 3D Model





Appendix E.

Simulation Viewpoint Data

Portageville Bridge
VIA – Viewpoint Rendering Data

General

Angle between North and Bridge (longitudinal direction): 113 (clockwise from North)
Latitude: 42.58N
Longitude: 78.05W

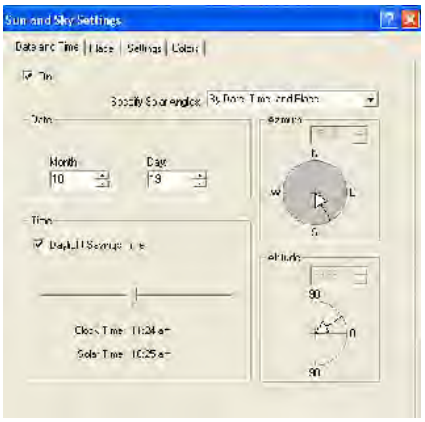
Viewpoint A

Size: 768 x 1024
Date taken: n/a
Time taken: n/a
Sun azimuth: 290.0 (clockwise from North)
Sun Altitude: 80.00
Camera Used: n/a
Image Sensor: n/a
Focal Length Modification (FLM) Factor: n/a
Recorded Focal Length: n/a
Adjusted Focal Length: 50 mm

Note: No image data available. Sun and Sky Settings approximated.

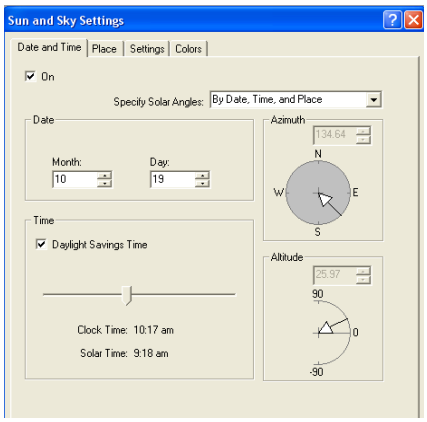
Viewpoint B

Size: 6048 x 4032
Date taken: 10/19/2009
Time taken: 11:24:07 AM
Sun azimuth: 151.66
Sun Altitude: 33.38
Camera Used: Nikon D3X
Image Sensor: CMOS sensor, 35.9 x 24.0 mm
Focal Length Modification (FLM) Factor: 1.0
Recorded Focal Length: 110 mm
Adjusted Focal Length: 110 mm



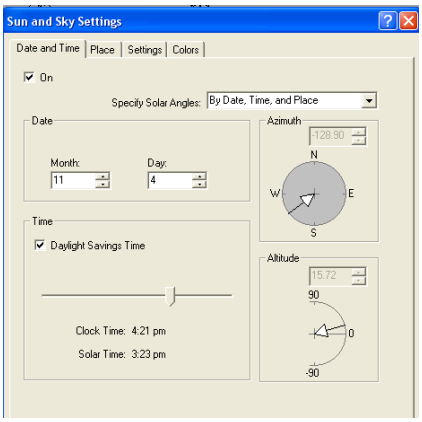
Viewpoint C

Size: 6048 x 4032
Date taken: 10/19/2009
Time taken: 10:17:12 AM
Sun azimuth: 134.64
Sun Altitude: 25.97
Camera Used: Nikon D3X
Image Sensor: CMOS sensor, 35.9 x 24.0 mm
Focal Length Modification (FLM) Factor: 1.0
Recorded Focal Length: 24 mm
Adjusted Focal Length: 24 mm



Viewpoint D

Size: 3008 x 2000
Date taken: 11/04/2009
Time taken: 06:12:34 AM (*adjusted: 16:21:34 PM)
Sun azimuth: 128.90
Sun Altitude: 15.72
Camera Used: Nikon D50
Image Sensor: 23.7 x 15.6 mm RGB CCD
Focal Length Modification (FLM) Factor: 1.5
Recorded Focal Length: 18 mm
Adjusted Focal Length: 27 mm



*Adjusted time; camera time stamp off by 10:09:00.

Appendix F.

Visual Impact Assessment Rating Forms

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: Jan. 11, 2010
District/ Field Office:
Resource Area:
Activity (program): existing + new bridge

SECTION A. PROJECT INFORMATION

1. Project Name	4. Location	5. Location Sketch
Portageville RR bridge	Township	Genesee Falls / Portage / center of river
2. Key Observation Point: viewpoint 'A'	Range	
3. VRM Class	Section	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	gorge/canyon walls + falls + pool.	left: smooth curv. columns right side	rectilinear, blocky.
LINE	vertical – landforms, vertical – horizontal water	irregular diagonal left. ridgeline horizontal.	strong horizontal & vertical in bridge
COLOR	gray brown ledge. white falls – gray/green pool.	gray saturated green	black – dark RR cars – dark colors
TEXTURE	striations in rock ledge	even left side – rougher right side	hard smooth + lattice repetitive

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	additional arc + structural members → thicker
LINE	no change	no change	+ added curve plus diagonals verticals & horizontals
COLOR	no change	no change	darker but brown/black
TEXTURE	no change	no change	coarser texture but similar

SECTION D. CONTRAST RATING ___SHORT TERM X LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X			X	

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: RLS — Date

SECTION D. (Continued)

Comments from item 2.

equal scale + spatial dominance to existing structure.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: Jan 11, 2010
District/ Field Office:
Resource Area:
Activity (program): new bridge

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville TCE bridge
2. Key Observation Point: viewpoint 'A'
3. VRM Class
4. Location Township / Range / Section
5. Location Sketch: Genesee Falls, Portageville

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	same	same	same
LINE	↓	↓	↓
COLOR			
TEXTURE	↓	↓	↓

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	no change	open up. no change	curve + horizontal + vertical restrikes
LINE	no change	no change	strong horizontal, vertical + diagonal.
COLOR	no change	no change	dark brown.
TEXTURE	no change	no change	smooth → rough

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X	X			
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X			X	

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names RLS Date

SECTION D. (Continued)

Comments from item 2.

introduces new ~~difficult~~ form in place of the old RR bridge.
opens up sky
opens up bridge line (vegetation).
removal of buttresses of old bridge.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/2010
District/ Field Office:
Resource Area:
Activity (program): Ex. + New Bridge

SECTION A. PROJECT INFORMATION

1. Project Name	4. Location	5. Location Sketch
Portageville Rail Bridge	Township Genesee Falls	
2. Key Observation Point: VIEWPOINT A	Range	
3. VRM Class	Section	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Canyon/Gorge Waterfall + Pool	Smooth / Columnar Forms on Right	Rectilenear / Block
LINE	Strong vertical landform Vert. + Horizontal w/ water	Irregular / diagonal Left Ridge line on Right	Very strong horizonal and Vertical
COLOR	Gray/brown White falls / grey green Pool	Strong greens / browns	dark / Brown / Reds
TEX-TURE	Jagged striations in rock form	even on left irregular on rightside.	Hard / smooth / regular repetitive

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	NO CHANGE	NO CHANGE	Additional Prominent Arc. in Middleground / Thicker
LINE	NO CHANGE	NO CHANGE	Additional curved + vertical + Horizonal + Diagonal lines.
COLOR	NO CHANGE	NO CHANGE.	Lighter brown color.
TEX-TURE	NO CHANGE	NO CHANGE	More course structure as opposed to detailed lattice inexisting

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				P		X		
	LINE				X				X	X			
	COLOR				X				X			X	
	TEXTURE				X				X		X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: GWP
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date:
District/ Field Office:
Resource Area:
Activity (program): New Bridge Only

SECTION A. PROJECT INFORMATION

1. Project Name	4. Location	5. Location Sketch
Portageville Rail Bridge	Township GF	
2. Key Observation Point	Range	
3. VRM Class	Section	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEX-TURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No interruption on Waterfall color	Less interruption on Vegetative edges	Prominent Arc with Strong horizontal element
LINE	NO CHANGE		U. Strong horizontal w/ multiple vert. + diagonal lines capped by Arc
COLOR	NO CHANGE		Brown / DK / earthtone
TEX-TURE	NO CHANGE		Course / stark

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				x				x		x		
	LINE				x				x		x		
	COLOR				x				x			x	
	TEXTURE				x				x			x	

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: GWP

Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

More sky visible w/ less interuption

Vegetative edges no longer interrupted

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): Existig + New Bridge

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Rail Bridge
2. Key Observation Point: Viewpoint A
3. VRM Class
4. Location Genesee Township Falls Range Section
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Gorge/canyon w/ surface water, pool & falls	Smooth, even forms on left, columnar forms on the right side	Rectilinear form, blocky of bridge
LINE	Strong vertical lines for land forms/vert. & horizontal for water forms	Vegetation forms an irregular diagonal, ridge line on right	Strong horizontal + vertical of bridge
COLOR	Gray/brown ledge rock white falls, gray-green pool	Saturated greens, some brown tones	Very dark, bleach bridge structure.
TEXTURE	Striated rock ledge, layered	Even, compact like treetops on right, irregular tufts of veg.	Lattice-like texture of bridge supports, regular; vegetation

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	Addition of strong arc form + structural members thicker
LINE	No change	No change	Additional curve, vertical and horizontals
COLOR	No change	No change	Brown bridge structure behind ex. black members
TEXTURE	No		Heavier, coarser texture to bridge structure

SECTION D. CONTRAST RATING ___SHORT TERM ___LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X			X	

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: M. Gridley
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): New bridge only

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Rail Bridge
2. Key Observation Point: Viewpoint A
3. VRM Class
4. Location Township: Genesee Falls; Range; Section
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEXTURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	Straighter horizontal, thicker bridge structure, less vertical
LINE	↓	↓	More dominant horizontal line, curvilinear arch
COLOR	↓	↓	lighter brown, more perceptible on thicker structure
TEXTURE	↓	↓	Coarser, simpler texture

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X				X	X			
	COLOR				X				X			X	
	TEXTURE				X				X			X	

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: M. Gridley
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

- New structure opens and frames view of sky w/ arch, lack of center member
- Removal of concrete foundation creates smooth line between water and vegetation at falls.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/2010
District/ Field Office:
Resource Area:
Activity (program): existing + new bridge

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Bridge
2. Key Observation Point: Viewpoint B
3. VRM Class
4. Location Township_____ Range_____ Section_____
5. Location Sketch: inspiration point.

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	canyon walls, falls, flat water surface	columnar ~~forms~~ above ridge + rock vegetation	rectilinear midground.
LINE	vertical walls + ridgeline + separation water	individual tree trunks vertical. + irregular horizontal ridgeline	midground verticals + stronger horizontal.
COLOR	light to dark browns + grays	greens, yellows, reds fall foliage	dark black–brown.
TEXTURE	striated rock ledge – rough falls, smooth water + mist	irregular fragmented – more regular midground.	fine texture & structure members at distance

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	addition steel arch + horizontal member
LINE	no change	no change	much stronger curve + horizontal + vertical.
COLOR	no change	no change	brown is more noticeable
TEXTURE	no change	no change	texture similar at distance

SECTION D. CONTRAST RATING __SHORT TERM X LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X			X	

2. ~~Does project design meet visual resource management objectives? __Yes __No (Explain on reverses side)~~

3. Additional mitigating measures recommended __Yes __No (Explain on reverses side)

Evaluator's Names: BLS
Date: 1/11/2010

SECTION D. (Continued)

Comments from item 2.

new bridge is ~~that~~ of old structure more dominant because of form, line + color
old bridge partially screened by mist + topography from this viewpoint -
cumulative effect more noticeable - add to existing structure

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/2010
District/ Field Office:
Resource Area:
Activity (program): ~~Grading~~ new bridge

SECTION A. PROJECT INFORMATION

1. Project Name: Portage vlk TCF bridge
2. Key Observation Point: viewpoint B
3. VRM Class
4. Location Township_____ Range_____ Section_____
5. Location Sketch: inspiration point

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	same	same	same
LINE	↓	↓	↓
COLOR			
TEXTURE	↓	↓	↓

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	no change	no change	introduces arch + lattice
LINE	no change	no change	~~strong~~ curves + vertical members
COLOR	no change	no change	brown compatible but darker
TEXTURE	no change	no change	same lattice like ~~texture~~

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X			X	
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X			X	

~~2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)~~

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: RCS
Date: 1/11/2010

SECTION D. (Continued)

Comments from item 2.

has less cumulative impact + cleaner design
only lines of arch + vertical make it noticeable
at this distance from inspiration point.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): New Bridge + Existing

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Rail Bridge
2. Key Observation Point: Viewpoint B
3. VRM Class
4. Location Township GF; Range; Section
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Strong canyon walls. Linear Horizon Flat water surface + Vert Falls	Columnar vegetative forms above ridge. Smoother forms in valley	Rectilinear form faded in background
LINE	Vertical canyon walls / Trees Horizontal / Horizon line Curvilinear water's edge	Vert. forms apparent in trees background tree from a strong horizontal / irregular horizontal	Strong horizontal element. fine vertical / diagonal lines
COLOR	Grey / white / brownish / reds Stone / water / stone	Greens / yellow / orange / Browns bright hints of red and yellow	Appear dk. brown / Black
TEXTURE	Stone make jagged foreground Smooth water textures mist fine	Medium texture with Irregular foreground	Fine / regular texture on horizontal with faint directional elements in verticals.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	NO CHANGE		Bridge reads as one prominent structure with solid arch.
LINE	No CHANGE		Reinforced horizontal Line w/ strong arch dissecting vert. forms of existing bridge
COLOR	NO CHANGE		Lighter brown contrasts with dk. Structure of old bridge
TEXTURE	NO CHANGE		Structures together make less ordered (random) texture. Texture becomes more dense.

SECTION D. CONTRAST RATING ___SHORT TERM ___LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X		X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: GWP — Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

Structure together increase noticibility and the lines become less ordered reading as a mass rather than a series of lines. (Cumulative effect)

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 01/11/10
District/ Field Office:
Resource Area:
Activity (program): New Bridge only

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Rail Bridge
2. Key Observation Point: VIEWPOINT B
3. VRM Class
4. Location Township GF, Range, Section
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEXTURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	NO CHANGE	NO CHANGE	Prominent Arch / members / and deck. Irregular due to variable size of supports + interruption of Arch
LINE			Smooth arch interrupted at akward point. Hard vertical + Horizontal Lines.
COLOR			Color appears stark against background. Contrast.
TEXTURE			Texture is regular. Begins to read as a mass, but still has transparency

SECTION D. CONTRAST RATING ___SHORT TERM ___LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X				X			X	
	COLOR				X				X		X		
	TEXTURE				X				X			X	

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: GNP
Date: 01/11/10

SECTION D. (Continued)

Comments from item 2.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): Existing + New Bridge

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Rail Bridge
2. Key Observation Point: Viewpoint 'B'
3. VRM Class
4. Location: Genesee Township Falls; Range; Section
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Vertical gorge walls, flat water surface above, vertical falls.	Move upright forms above rim of gorge, smoother forms below the rim,	Rectilinear form, receding into background.
LINE	Strong vertical limit wall of gorge, horizontal at top of falls. Curvilinear waters edge	Verticals of tree trunks - horizontal branches in foreground, Move irregular horizontals in back along canopy	Strong vertical and horizontal but receding in background. Thin line weight.
COLOR	Brown, grey and reddish stone wall of gorge, white and grey water	Yellow, green, orange and red foliage, black or grey trunks and branches	Black structural members
TEXTURE	Striated rock, smooth water surface, irregular coarse texture of falls, Smooth mist texture	Medium grain, dense pattern of vegetation - Coarser in foreground	Uniform, regular texture of repetitive bridge structural members

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	Stronger form of arc below bridge deck, more complexity
LINE	↓	↓	Heavier density of lines, strong curvilinear form, strong contrast to background
COLOR	↓	↓	Lighter brown structural members - less contrast than black members of existing
TEXTURE	↓	↓	Finer w/ more complexity, overlap of bridge forms creates an irregular series of geometric patterns

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X		X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: M. Gridley
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

- Bridge decks align visually in this view. Contrast comes from interaction of bridge substructures in terms of line, color and texture.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): New Bridge only

SECTION A. PROJECT INFORMATION

1. Project Name Portageville Rail Bridge	4. Location Township Genesee Falls	5. Location Sketch
2. Key Observation Point Viewpoint 'B'	Range____	
3. VRM Class	Section____	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEXTURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	Strong horizontal form, strong arc of substructure
LINE	↓	↓	Bolder, heavier line weight of structure – less complexity
COLOR	↓	↓	Light brown contrasts w/ fall foliage – but more in harmony than black
TEXTURE	↓	↓	Medium, regular texture, coarser and simpler than the existing bridge

SECTION D. CONTRAST RATING ___SHORT TERM ___LONG TERM

1\.

DEGREE OF CONTRAST	LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS: FORM				X				X		X		
LINE				X				X			X	
COLOR				X				X			X	
TEXTURE				X				X			X	

2\. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3\. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: M. Gridley   Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

- Simpler form of new bridge opens more view of background
- Strong form of arch more dominant at right side (west) than existing structure.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: Jan. 11, 200
District/ Field Office:
Resource Area:
Activity (program): how + dd bridge

SECTION A. PROJECT INFORMATION

1. Project Name: Portage wilk RR. bridge
2. Key Observation Point: viewpoint "C"
3. VRM Class
4. Location Township_____ Range_____ Section_____
5. Location Sketch: trail viewpoint west

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	open water + falls, rocky edge; walls background.	irregular columnar forms	rectilinear forms relief from blocky elements.
LINE	horizontal shoreline edges irregular at places	vertical tree trunks foreground columnar tree shapes	strong horizontal + vertical members
COLOR	blue grey water + white falls brown rock	fall foliage - green, yellow orange.	dark → black
TEXTURE	flowing falls - regular water surface	irregular foreground → more regular - mix → background	lattice work on vertical support members

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	no change	some add veg blocked	addition of arch + platform + supporting members
LINE	no change	no change	addition of curves plus vertical parallel horizontal + diagonal.
COLOR	no change	no change	slight shift - black to brown both dark
TEXTURE	no change	no change	slightly coarse texture

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X			X			X	X	
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X			X	

2. ~~Does project design meet visual resource management objectives?~~ __Yes __No (Explain on reverses side)
additional trees

3. Additional mitigating measures recommended __Yes __No (Explain on reverses side)

Evaluator's Names Date

SECTION D. (Continued)

Comments from item 2.

new bridge is behind old bridge.
Very similar horizontal members but adds
curved shape + lines - plus some new
verticals & diagonals.
color & texture very similar w/ this lighting direction
some cumulative effect - adding both together.
creates greater mass + blockage.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: Jan. 11, 2010
District/ Field Office:
Resource Area:
Activity (program): only new bridge

SECTION A. PROJECT INFORMATION

1. Project Name	4. Location	5. Location Sketch
Portageville RR bridge	Township_____	trail viewpoint west
2. Key Observation Point: viewpoint "C"	Range_____	
3. VRM Class	Section_____	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	same	same	same
LINE			
COLOR			
TEXTURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	remain at bridge abutments	no change	shift to horizontal structure from vertical & horizontal.
LINE	no change	no change	eliminate vertical support structures - addition of curves plus strong horizontal.
COLOR	no change	no change	shift from black to brown.
TEXTURE	no change	no change	horizontal lattice vs. both horizontal & vertical.

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				+				x		x	x	
	LINE				x				x		x		
	COLOR				x				x			x	
	TEXTURE				x				x			x	

2. ~~Does project design meet visual resource management objectives?~~ ___Yes ___No
(Explain on reverses side)
additional factors

3. Additional mitigating measures recommended
___Yes ___No (Explain on reverses side)

Evaluator's Names Date

SECTION D. (Continued)

Comments from item 2.

eliminates ~~d~~ vertical support structures + abutments
opens up water areas + badegral views.
less blockage
but introduces strong curvilinear + horizontal forms + lines.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program):

SECTION A. PROJECT INFORMATION

1. Project Name: PORTAGEVILLE RAIL BRIDGE
2. Key Observation Point: VIEWPOINT C
3. VRM Class
4. Location Township_____ Range_____ Section_____
5. Location Sketch: Trail on west side / overlook

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Land form is not apparent irregular edge along water water Smooth w/ rough jagged at falls	Regular to the left becoming irregular in foreground. Distinct Columnar foreground.	Rectangular form based w/ regular upright columns. Fine Vertical + Horizontal Details
LINE	Strong diagonal on left water creates irregular horizontal	Right foreground creates Vertical element followed by and implied curvilinear background	Strong prominent horizontal line broken up by fine verti + horizontals. Supports also prominent vert, lines w/ diag.
COLOR	water - white, grey blue Land Dark grey / black	Dark green / black with Yellow / orange highlights	Black
TEXTURE	Smooth on water, Irregular foreground landform	Regular on left. irregular foreground.	Stark regular texture on deck. Supports appear ordered.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	NO CHANGE	NO CHANGE	Introduction of second bridge adds a new form defined by the strong arch and horizontal deck. Upright supports conflict with form of old bridge
LINE		Interrupts the defined line formed by vegetation on left. Minor change	Uprights appear irregular. Arch + horizontal line appear bold + dense creating layers w/ old bridge
COLOR		NO CHANGE	Reddish brown blends with surrounds.
TEXTURE		NO CHANGE	Uprights appear jagged and irregular. Arch and deck appear regular + smooth

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X			X		X			
	COLOR				X				X			X	
	TEXTURE				X				X		X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: GWP
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): New Bridge only

SECTION A. PROJECT INFORMATION

1. Project Name: Portaguille Rail Bridge
2. Key Observation Point: VIEWPOINT C
3. VRM Class
4. Location Township_____ Range_____ Section_____
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEXTURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	NO CHANGE	Regularity in background vege	Solid - geometric w/ vertical horizontal and diagnol masses
LINE	water edge creates a well defined irregular line not previously apparent	Curvilinear line formed by vegetn background appears more prominent	Simple regular curved and horizontal lines. Dense + Bold against sky.
COLOR	NO CHANGE	Uninterrupted background Colors more apparent.	
TEXTURE	Mid + Background water surface appear larger and more smooth	Regular texture visible in bck. ground vege. due to removal of old bridge.	Structure look dense + heavy

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				+			X	
	LINE				+				+		X		
	COLOR				X				+			X	
	TEXTURE				+				+			X	

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: GWD
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): Existing & New Bridge

SECTION A. PROJECT INFORMATION

1. Project Name	4. Location Genesee	5. Location Sketch
Portageville Rail Bridge	Township Falls	
2. Key Observation Point	Range	
Viewpoint C		
3. VRM Class	Section	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Irregular form of rocks in foreground. Horizontal irregular form of water below bridge	Diagonal edge of treeline on left; Upright vertical mass of foreground trees on left	Open lattice-like structure of bridge. Heavier mass of bridge deck above.
LINE	Irregular horizontal line between water and shoreline	Irregular diagonal line between treeline and sky. Coarser edge between treeline and sky on right	Very strong horizontal and vertical forms with lighter weight diagonal forms.
COLOR	White/grey water; Dark grey stone at waters edge	Orange, green, yellow and red fall foliage; darker in shaded area to left side of trees	Almost completely black; very little reflected color.
TEXTURE	Medium grain water in smooth areas; coarser in white water	Medium grain, high density in mid and background, Coarser texture in foreground	Medium to fine texture of repetitive light bridge members and cross bracing.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	Heavy mass created by the bold form of the deck and arch. Silhoutte against sky
LINE	↓	↓	More complexity w/ overlaid forms of adjacent structures. Bold, simpler lines over lighter line weight of existing
COLOR	↓	↓	Lighter brown bridge color more visible over darker vegetation background
TEXTURE	↓	↓	Heavier, more dense texture against uniform background of sky.

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X	X			
	LINE				X				X	X			
	COLOR				X				X		X		
	TEXTURE				X				X		X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: M. Gridley
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

- The uniform background of the sky in this view makes the contrast of all new structural elements high.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): New Bridge only

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Rail Bridge
2. Key Observation Point: Viewpoint C
3. VRM Class
4. Location Township: Genesee Falls
Range
Section
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEXTURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	No change	More massive horizontal form, less vertical mass, Strong enclosing form of arch
LINE	↓	↓	Bolder, heavier line weight, Simpler. Strong curvilinear form of lower arch.
COLOR	↓	↓	Lighter brown color, more visible over vegetation on left side of view
TEXTURE	↓	↓	Simpler, less complex pattern of repeated, regular vertical members

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X				X		X		
	LINE				X				X			X	
	COLOR				X				X			X	
	TEXTURE				X				X		X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: M. Gridley
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

- New bridge is heavier in line weight and mass of form, but extends less into the lower and central parts of the view.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/2010
District/ Field Office:
Resource Area:
Activity (program): cnty new bridge

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville KE bridge
2. Key Observation Point: viewpoint "D"
3. VRM Class

4. Location
Township
Range
Section

5. Location Sketch: from Park Rod looking south

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	same	same	same
LINE	↓	↓	↓
COLOR			
TEXTURE	↓	↓	↓

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	slight impact on landform	blockage of vegetation	introduction of massive platform + support members
LINE	no change	no change	very strong horizontal plus some vertical
COLOR	no change	no change	more compatible color with landscape
TEXTURE	no change	no change	very smooth texture vs. former bridge

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM			X				X		X			
	LINE				X				X		X		
	COLOR				X				X			X	
	TEXTURE				X				X			X	

2. ~~Does project design meet visual resource management objectives~~? ___Yes ___No
(Explain on reverses side)
other factors

3. Additional mitigating measures recommended
___Yes ___No (Explain on reverses side)

Evaluator's Names: KCS
Date: 1/11/2010

SECTION D. (Continued)

Comments from item 2.

new bridge is clean design - goes up more sky but appears massive in form and spatial dominance from this viewpoint

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/2010
District/ Field Office:
Resource Area:
Activity (program): new + old bridge

SECTION A. PROJECT INFORMATION

1. Project Name	4. Location	5. Location Sketch
Dodgeville RR bridge	Township_____	from Pole Road looking south
2. Key Observation Point: Viewpoint "D"	Range_____	
3. VRM Class	Section_____	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	hillslope left side for ridge line	columnar deciduous + evergreen trees	strong rectilinear bridge platform + support members
LINE	gentle diagonal + for ridge line	vertical foreground tree trunks	very strong horizontal + vertical support members
COLOR	grey road surface	green grass, dk green evergreens, brown tree trunks	dark black-brown
TEX-TURE	smooth hillside + road surface	irregular tree shapes. more regular background	hard smooth metallic surfaces

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	no change	blades some vegetation	massive platform plus support structures
LINE	no change	no change	strong horizontal plus verticals introduced.
COLOR	no change	no change	added bolder medium brown + light grey.
TEX-TURE	no change	no change	smooth surfaces of both steel + concrete

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)			
		STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE	STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X			X		X			
	LINE				X				X	X			
	COLOR				X				X		X	X	
	TEXTURE				X				X		X		

2. ~~Does project design meet visual resource management objectives?~~ ___Yes ___No
(Explain on reverses side)
also factors

3. Additional mitigating measures recommended
___Yes ___No (Explain on reverses side)

Evaluator's Names: RCS
Date: 1/11/2010

SECTION D. (Continued)

Comments from item 2.

introduction of new structure in flat of old struct
with massive platform plus support columns → spatial dominance
dominates plus cumulative impact from this view.
colors are more compatible as well as textures

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): New + Old Bridge.

SECTION A. PROJECT INFORMATION

1. Project Name: PORTAGEVILLE RAIL BRIDGE
2. Key Observation Point: VIEWPOINT D
3. VRM Class
4. Location Township_____ Range_____ Section_____
5. Location Sketch: PARK ROAD

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat Foreground giving way to rolling topography. Hints of steep topo in background.	Irregular columnar forms in foreground with regular gentle form in background	Distinct, Bold rectangular form w/ columnar uprights and irregular supports.
LINE	Road edge and parking lot edge form a distinct perspective reinforcing line moving away from viewer	Trunks form strong vertical lines and broken horizontal in background	Strong horizontal + Vertical lines. Bold / stark against sky
COLOR	Leaves create reddish browns/ oranges with grey asphalt	Dk browns + Greens w/ hints of red orange / lt brown	Very dark brown / reddish brown → black
TEXTURE	Smooth road + Lot. Smooth irregular texture from leaves.	Irregular jagged foreground / midground	Smooth horizontal w/ Jagged uprights. Softened by linear forms.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Interrupts the regular rolling form,	Columnar forms against sky interrupted	Additional distinct horizontal element dominates. Vertical Columnar forms also dominate foreground. Cumulative
LINE	Minor interruption of landform lines in midground.	Vertical lines formed by trees no longer dominate	Large mass edges appear as mutiple horizontal lines in foreground. Vert. lines apparent in Conc. structure
COLOR	Introduction of light greys tends to minimize landform color	NO Change	Introduction of large areas of lt. grey + Reddish brown
TEXTURE	NO CHANGE	Interrupts natural texture of vegetation	Dense, smooth texture Cumulative effect.

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM			X				X		X			
	LINE			X			X				X		
	COLOR		X						X			X	
	TEXTURE				X			X			X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: GWP
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

Cumulative effect increases scale and spacial enclosure / density.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): New Bridge Only

SECTION A. PROJECT INFORMATION

1. Project Name	4. Location	5. Location Sketch
Portageville Rail Bridge	Township_____	Park Rd
2. Key Observation Point: Viewpoint D	Range_____	
3. VRM Class	Section_____	

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEX-TURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	NO CHANGE	Columnar forms against Sky interrupted	Large simple dense form dominates view
LINE	Reinforces lines created by road. less interruption	Background vege line reinforced Vert. lines less dominant	Edge of masses forms regular horizontal and vert. lines
COLOR	Introduction of large Column dominates foreground colour	NO CHANGE	Removal of old bridge negates color addition of new. Concrete grey dominates
TEX-TURE	NO CHANGE	Interrupts natural texture formed by vegetation	Dense smooth. Old brigde removal allows additional natural texture.

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X			X		X			
	LINE				+				+		X		
	COLOR			X					X			X	
	TEXTURE				X			X				X	

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: GWP — Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

Removal of old bridge reduces overall cumulative scale. The scene appears more spacially "open" with less foreground vertical interruption.

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): New bridge only

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Rail Bridge
2. Key Observation Point: Viewpoint 'D'
3. VRM Class
4. Location Genesee Township Falls
Range
Section
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEXTURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	New structure obscures and reduces mass of vegetation	Heavy, simple mass of vertical and horizontal structures more sharply contrasts against background
LINE	↓	New structure breaks up the lines of vegetation.	Bold heavy lines dominate, less line complexity. Not interrupted by vegetation lines.
COLOR	↓	No change	Similar dark brown tones to existing. Concrete introduces a grey element.
TEXTURE	↓	No change	Very smooth and uniform in texture

SECTION D. CONTRAST RATING __SHORT TERM __LONG TERM

1. DEGREE OF CONTRAST

ELEMENTS	FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
FORM										X		
LINE										X		
COLOR											X	
TEXTURE										X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: M. Gridley
Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

- Uniform, monolithic mass of new bridge structure contrasts with the lighter line weight of the existing bridge but is mitigated by the greater line and texture complexity of of the existing bridge which has been removed from the view.
- Lighter color and greater mass of the new bridge make shadow lines more apparent

Additional Mitigating Measures (See item 3)

Form 8400-4

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VISUAL CONTRAST RATING WORKSHEET

Date: 1/11/10
District/ Field Office:
Resource Area:
Activity (program): Existing & new bridge

SECTION A. PROJECT INFORMATION

1. Project Name: Portageville Rail Bridge
2. Key Observation Point: Viewpoint D
3. VRM Class
4. Location: Genesee Township Falls; Range; Section
5. Location Sketch

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Land forms slopes down from pkg. area to the left. Edge on gorge side hidden.	Open mass of tree trunks and branches in foreground. More dense mass of vegetation in bkgrnd.	Massive bridge deck structure creates strong horizontal form.
LINE	Strong curvilinear line at pavement edges	Irregular horizontal line of tree line at horizon. Irregular branching patterns	Heavy weight of deck in horizontal, regular pattern of vertical supports.
COLOR	Grey-green of background hills, Grey pavement; orange/brown leaves over foreground landform	Grey and brown trunks and branches in foreground, some green lawn visible through orange leaves	Black and dark reddish brown steel structural members of bridge.
TEXTURE	Smooth texture of lawn surface and pavement	Smooth lawn surface, Coarse texture of tree trunks and branches	Smooth texture of surfaces, regular repetitive patterns of bridge support structure

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	No change	Some vegetation is obscured by new bridge	Heavy vertical form of monolithic concrete support. Heavy vertical form of deck
LINE	↓	Vertical line of trees is interrupted by new bridge structure	Simpler, less complex lines of new bridge superimposed on existing bridge lighter lines
COLOR	↓	No change	Dark brown bridge deck and steel, med gray concrete support and deck surface
TEXTURE	↓	No change	Smooth, continuous and uniform texture of new bridge overlaid on finer texture and pattern of existing

SECTION D. CONTRAST RATING ___SHORT TERM ___LONG TERM

1. DEGREE OF CONTRAST		FEATURES: LAND/WATER BODY (1) STRONG	MODERATE	WEAK	NONE	VEGETATION (2) STRONG	MODERATE	WEAK	NONE	STRUCTURES (3) STRONG	MODERATE	WEAK	NONE
ELEMENTS	FORM				X			X		X			
	LINE				X			X			X		
	COLOR				X				X			X	
	TEXTURE				X				X		X		

2. Does project design meet visual resource management objectives? ___Yes ___No (Explain on reverses side)

3. Additional mitigating measures recommended ___Yes ___No (Explain on reverses side)

Evaluator's Names: M. Goodley — Date: 1/11/10

SECTION D. (Continued)

Comments from item 2.

- Heavy form and monolithic structure of the new bridge are sharply in contrast with the old bridge at this viewpoint. Color differences are less apparent at this range, as there is more variation visible on the old bridge.

Additional Mitigating Measures (See item 3)

Appendix G.

Resumes of VIA Rating Panel Members

Michael M. Gridley, R.L.A., LEED AP

Senior Landscape Architect

Syracuse Office

Michael Gridley is the senior landscape architect in C&S's Planning Group. He has13 years of experience with project management, design, and construction. His responsibilities include project management, landscape architectural design, visualization, rendering, and construction administration. His project experience includes parks, trails, greenways, streetscapes, commercial and institutional site development, and land planning. Michael has also served as a visiting instructor of landscape architecture at SUNY College of Environmental Science and Forestry, teaching in the undergraduate design studio.

Education

Bachelor of Arts, St. Lawrence University, 1988

Master of Science, SUNY College of Environmental Science and Forestry, 1990

Master of Landscape Architecture, SUNY College of Environmental Science and Forestry, 1997

Registration and Certifications

Registered Landscape Architect, New York, 2003

Council of Landscape Architectural Registration Boards (CLARB) certified, 2008

LEED Accredited Professional, 2009

Professional Organizations

American Society of Landscape Architects, Member

Experience

Parks, Trails, and Greenways

Syracuse Creekwalk, City of Syracuse, Syracuse, NY, 2009—Conceptual design through construction documents for a bicycle and pedestrian trail through the heart of Syracuse, New York. Tasks included design for handicapped-accessibility, coordination with the City and NYS Department of Transportation, and the design of sustainable features such as rain gardens, permeable pavements, and solar powered pedestrian crossing beacons.

Leeds Ecotrail Boardwalk and Trail, E.B. Forsythe National Wildlife Refuge, U.S. Fish and Wildlife Service, Oceanville, NJ, 2009—Conceptual design through construction documents for a boardwalk and trail system in a National Wildlife Refuge located in coastal southern New Jersey. Tasks included design for handicapped-accessibility, maintaining regulatory compliance due to the sensitive tidal saltwater marsh habitat, design using recycled plastic lumber for all structural components, decking, and railing systems and the design of a helical pile foundation system to minimize disturbance to the marsh habitat.

Green Lakes State Park, NYSOPR&HP, Manlius, NY, 2008—Completed a conceptual design and feasibility study to identify opportunities to enhance and improve vehicular and pedestrian circulation and access, as well as increase visual presence of the buildings in and around the beach area at a popular state park in Central New York. Improvements to the lake outlet drainage control were also studied as part of the overall plan.

Sampson State Park, NYSOPR&HP, Romulus, NY, 2008—Completed a conceptual master plan and feasibility study to identify opportunities to enhance and improve vehicular and pedestrian circulation and access, to a marina facility at a popular state park in the Finger Lakes region.

Cayuga Lake State Park, NYSOPR&HP, Seneca Falls, NY, 2009—Conceptual design through construction documents for pedestrian and handicapped access improvements to a popular waterfront park in the Finger Lakes region. Tasks included design for handicapped-accessibility, improvements to vehicular and pedestrian pathways, and rehabilitation of an aging seawall structure.

Seneca Lake State Park, NYSOPR&HP, Geneva, NY, 2009—Conceptual design through construction documents for pedestrian and handicapped access improvements to a popular waterfront park in the Finger Lakes region. Tasks included design for handicapped-accessibility, improvements to vehicular and pedestrian pathways, and rehabilitation of an aging seawall structure.

Visitor Center and Administrative Facility, Long Island National Wildlife Refuge Complex, U.S. Fish and Wildlife Service, Shirley, NY, 2009—Conceptual design through construction documents for a new visitor center/administrative facility in a National Wildlife Refuge located in coastal Long Island, NY. Tasks included developing site plans, grading and drainage design, and landscape design. Key issues included maintaining regulatory compliance due to the sensitive tidal saltwater marsh habitat, and employing sustainable site design principles in the development of a planned LEED certified facility.

Visitor Center and Administrative Facility, Potomac National Wildlife Refuge Complex, U.S. Fish and Wildlife Service, Woodbridge, VA, 2009—Conceptual design through construction documents for a new visitor center/administrative facility in a National Wildlife Refuge located in coastal Long Island, NY. Tasks included developing site plans, grading and drainage design, and landscape design. Key issues included maintaining regulatory compliance due to the sensitive tidal saltwater and freshwater wetland habitat, and employing sustainable site design techniques in the development of a planned LEED certified facility.

The following projects were completed as an employee of a previous firm.

Onondaga Lake Park Site Improvements, Onondaga County Parks Department, Liverpool, NY, 2004—Designed site improvements of a 28-acre portion of Onondaga Lake Park. Construction documents were developed for athletic fields, playgrounds, skate park, new bicycle and pedestrian trails, athletic fields, and new vehicular access and parking.

Town Park Improvements, New York Power Authority, Massena, NY, 2003—Designed landscape renovations for town park sites in the towns of Waddington, Massena, and Louisville in Northern New York as part of the New York Power Authority's relicensing commitment for the St. Lawrence/FDR hydro project in Massena. Projects included vehicular and pedestrian access improvements, improved site amenities, landscaping, and renovations to existing trails and facilities.

Erie Canal Corridor Trail, Village of Waterloo, Waterloo, NY, 2003—Developed route alternatives, preliminary design studies, and construction documentation for a bike/pedestrian trail in the village of Waterloo. Trail route was sited along an abandoned rail corridor with connecting segments along a historic canal towpath and former canal bed. Project currently in the right of way acquisition phase.

Schodack Island State Park, New York State Office of Parks, Recreation and Historic Preservation, Rensselaer County, NY, 2002—Designer involved with the design for a new State Park located on the Hudson River. Design included landscaping, pedestrian pavements, benches and other site amenities at the sites of the contact station, comfort station and the boat launch/promenade.

Corn Hill Recreation Trail Study, City of Rochester, Rochester, NY, 2002—Feasibility study for a recreational trail to be located in an historic urban neighborhood in the city of Rochester. Tasks included site investigation, analysis and development of alternative routing and locations for new gateway elements.

St. John's Meadow Trail, Town of Brighton, NY—Conceptual design through construction documentation for a wooded trail and boardwalk in the Town of Brighton. The trail was designed for ease of use by residents of an adjacent senior living facility. Challenges included crossing a NYSDEC regulated wetland and providing handicapped accessibility.

Radisson Community Trails, Baldwinsville, NY—Design, construction documentation and construction administration for a substantial addition to the trail system in the Radisson Community. Challenges included developing new trails in existing developed residential areas, and working with homeowners, developers, and homebuilders.

Gordon W. Perkins
Senior Visual Analyst

Education

Bachelor of Landscape Architecture
State University of New York, College of Environmental Science & Forestry, Syracuse, New York

Associate in Arts
Keystone College, La Plume, Pennsylvania

EMD International WindPRO Environment Course Certification

FXPHD Online Visual Effects Training Certification Course Fall 2007 Semester

Professional Experience

Mr. Perkins has a degree in landscape architecture with a focus on design visualization and visual impact assessment. With 10 years of experience, Gordon uses two-dimensional (2-D) and three dimensional (3-D) graphic applications to create visual simulations and effectively communicate design concepts. He is involved in ongoing evaluation and improvement of the technical methodology used in visual impact assessment, including new techniques in data collection, processing, and 3-D modeling. Gordon also has experience with visual policy guidelines and expert witness testimony.

Representative Project Experience

> Ripley-Westfield Wind Farm, Ripley and Westfield, NY – Visual resource assessment and shadow-flicker analysis for a 61-turbine wind farm.
> Moresville Energy Center, Stamford, NY – Simulations for the visual resource assessment for a 33-turbine wind farm located along the Moresville Range in the Scenic Catskill Mountain region.
> Arkwright Wind Farm, Arkwright, NY – Visual resource assessment and shadow-flicker analysis for a 47-turbine wind farm.
> Paradise Switchyard – Tonawanda, New York - Production of visual graphics depicting aerial and ground level views for a proposed switchyard and transmission line upgrades including mitigation options.*
> Upstate New York 230 kV Transmission Line (Article VII Application), Hounsfield to Mexico, NY– Visual Resource Assessment for a 51-mile above ground and sub-aquatic 230 kV transmission line.
> Southern Rhode Island Transmission Project, Rhode Island – Visual impact Assessment along with field data and expert testimony to the Rhode Island Public Service Board.*
> Jamestown Clean Coal Project – Provided ground level visual simulations and aerial view artist renderings for a 40 MW Coal Plant in Jamestown, New York.*
> Cohocton and Dutch Hill Wind Power Projects – Two Visual Impact Assessments for the Town of Cohocton in Steuben County, New York.*
> Marble River Wind Farm – Visual Impact Assessment for the Towns of Clinton and Ellenburg in Clinton County, New York.*
> St. Lucie Wind – Provided field assessment along with still and animated visual simulations for a 13.8 Megawatt wind project on Hutchinson Island, St. Lucie County, Florida.*
> Dairy Hills Wind Farm – Visual Impact Assessment for the Towns of Covington, Perry, and Warsaw in Wyoming County, New York.*
> New York Regional Interconnect (Article VII Application) – Provided expert witness testimony in support of an Article VII for a 1,200 Megawatt direct current transmission line running 190-Miles from Marcy, NY to New Windsor, NY.*

- Maple Ridge Wind Power Project, Tug Hill, NY – Provided comprehensive field evaluation, day and nighttime visual simulations, line of sight cross section analysis and viewshed analysis graphics contributing to the Visual Impact Assessment for the Largest Operational Wind Project and associated transmission line (Article VII Application) in the Eastern United States in Lewis County, New York.*
- Munnsville Wind Farm, Madison County, NY – Performed comprehensive field investigations and ballooning for a visual impact assessment for a 40 Megawatt wind project and associated transmission line and substation structures.*
- Meyersdale Wind Project, Meyersdale, PA – Provided visual simulations in support of a 30 Megawatt wind project.*
- Astoria Repowering, Queens, NY – Provided visual simulations for multiple mitigation options and architectural designs proposed by artist, Michel Singer for a power plant expansion in Queens, New York. *
- Cape Wind Project, Nantucket, MA – Visual Simulations and shoreline visibility analysis report for a proposed Offshore Wind Farm and Meteorological Tower for Americas First Offshore Wind Proposal off the coast of Cape Cod and the Island's of Martha's Vineyard and Nantucket, Massachusetts.*
- Rhode Island Offshore Wind Farm, Block Island, RI – Simulations for an offshore wind farm.
- Hardscrabble Wind Power Project – Visual impact Assessment in the Towns of Fairfield, Norway, and Little Falls in Herkimer County, New York.*

**Completed prior to affiliation with Saratoga Associates*

Resume for Richard C. Smardon, MLA, Ph.D. VIA Consultant

706 Fellows Avenue, Syracuse, New York 315 424-8833
Email address: rsmardon@mailbox.syr.edu

EDUCATION

1970 University of Massachusetts: BS in Environmental Design, cum laude
1973 University of Massachusetts: Masters in Landscape Architecture
1982 University of California: Ph.D. in Environmental Planning

PROFESSIONAL PRACTICE

Independent consultant post 2002
Vice-President, Integrated Site, Landscape Architects, PC from 1990-2002
Intermittent Faculty appointment, USCOE Water Exp. Station, Vicksburg 1988-90
Chief technical Consultant, Ecology Compliance Ltd., Syracuse 1981-83
Intermittent Faculty appointment, US Geological Survey, Reston VA 1980-82
Post Graduate Research Landscape Architect, UC Berkeley 1977-79
Landscape Architect, USDA Pacific SW For. & Range Exp. Station 1977
Environ. Impact Assessment Specialist, USDA Ext. Serv. OSU Corvallis 1975-76
Associate Planner, Ex. Office of Env. Affairs, Boston and Amherst MA 1973-75
Env. Planner/Land. Arch with Wallace, Floyd, Ellenzweig and Moore 1972-73

PROFESSIONAL AWARDS

2001- Strathmore's Who's Who - Leadership and Achievement in their Occupation, Industry or Profession

1990- Who's Who in the East, Who's Who in America, Who's Who in American Education, Who's Who in Engineering and Science

1993 Scenic America Award for Scenic Road Management Plans for Red Hook & Rhinebeck, New York under NY Scenic Roads Program.

1992 The New Public Realm Award Winner, Progressive Magazine for work on the Third Chicago Airport, Southeast Chicago and Environmental Opportunities: Ideas, Concepts and Suggestions.

1975 Design Award Recipient, Design & Environment Magazine for work on the Project: Evaluation of Freshwater Wetlands- Northeastern US

1971 ASLA Certificate of Honor for Excellence in the Study of Landscape Architecture - Graduate School MLA degree at UMass.

VISUAL IMPACT ASSESSMENT PROJECTS

Recent VIA projects - post ISLA, PC

2007 Expert Reviewer for NYS Department of State for visual portions of LNG Terminal proposed for Long Island Sound – included written response in regard to NYS CZM considerations plus Long Island Sound visual landscape compatibility issues.

2006-7 Visual quality control expert for Long Island offshore wind farm working with several other firms - project tabled.

2005 Expert reviewer for Tahoe Regional Planning Agency for visual shoreline development standards for Lake Tahoe, California and Nevada.

1991 External Reviewer to California Energy Commission for revamping Visual Impact Assessment Procedures

1992 Neutral third party VIA overview for the *Cape Wind Turbine Farm* - See website at http://www.publicdisputes.net/smardon/CAPEWIND_files/framehtm

2003 Assessment of *aesthetic impacts of small docks and piers for* NOAA - see website at http://www.cop.noaa.gov

2003 Thalle Quarry Expansion. Review of VIA of dolomite quarry expansion in Fishkill, NY for Scenic Hudson, Inc. Resulted in negotiated mitigation measures.

2007 Neutral third party overview of VIA for *St. Lawrence Cement facility* proposed for Hudson, New York

2002 External reviewer for NYS Department of Environmental Conservation Policy Procedure memorandum on visual resource assessment

Visual Impact Projects with Integrated Site Landscape Arch., PC

2006 Review of visual impact of housing development in West Nyack, NY for the Village of West Nyack including mitigation measures.

2001- Review and Critique of VIA for Bowline 3 Proposed co-generation Plant in Haverstraw, NY. Work included visual inventory of key viewpoints, computer visibility analysis, simulations from river edge viewpoints and direct testimony. Visual plus fisheries impacts resulted in dry cooling recommended by the administrative law judge and the NYSDEC Commissioner.

1999- *Bescicorp Newsprint Recycling and Co-Generation Facility*. Project manager for VIA work for three different sites. Recently completed PSC/DEC joint hearings in fall of 2003.

1999- *Torne Valley Energy Center* - Project manager for VIA quality control for Black and Veatch, Kansas City.

2008 *Bethlehem Energy Center* - Project manager for VIA critique for NYSDEC, Albany.

1998- Twin Tier Co-generation power Plant in Loundsbury, NY – assisted in VIA for this project with Young Associates (Green, NY). Work in included visual inventory, visibility assessment and landscape classification within a 5-mile radius along the Susquehanna River.

1998- *Athens Co-generation Facility* on Hudson River- Project manager for counter VIA for Scenic Hudson, Poughkeepsie, NY. Included redo of VIA, simulations and testimony in PSC hearings. Resulted in major new visual mitigation measures.

1998- *Route 8 (Riparius) over the Hudson River* - Project Manager for VIA, section 4(f) plus wild and scenic river assessment-subcontractor to Barton and Loguidice, Syracuse.

1995- *Route 219- Visual corridor analysis methodology* for 19-mile corridor, Springfield to Salamanca, NY. Subconsultant to Deleuw Cather, Buffalo, NY.

1995- *Route 17, Five-Mile Point to Occanum, NY* -Project Manager for VIA. Subconsultant to Harza Northeast, Utica, NY.

1994- *Hoosick Mine* - Project Manager for VIA of proposed limestone mine near Bennington, Vermont. subcontractor to Spectra, Latham. NY- included testimony in joint NYSDEC hearings.

1994- Limited visual analysis of *proposed recreational vehicle park for Association Island* in Henderson Harbor, NY.

1993- *Visual analysis of proposed small hydroelectric facility in Barbarsville Falls. NY* for Nature Conservancy, Troy, NY. Resulted in one of the few projects refused a FPC license because of aesthetic and economic grounds.

1992- Niagara Mohawk Power Corporation Public Involvement Plan – qualified as one of the consulting firms assisting Niagara Mohawk in environmental planning, public relations, public participation, visual analysis and innovative design solutions for electronic transmission facilities throughout the State of New York.

1992- *Project Independence Cogeneration facility* in Scriba, NY. Project Manager for VIA redo with Environmental Design and Research for Sithe Energies, Oswego, NY.

1992 *Snoqualmie Falls Relicensing* - aesthetic & visual impact review for existing hydro facility in Snoqualmie, WA. Subconsultant to EBASCO, Bellingham WA. Very controversial project involving low flow maintenance. Native American sacred significance of the falls plus regular VIA issues.

1993 St. Elizabeth's Hospital Proposed Medical Office Complex-as Project manager we developed a scoping process for assessing aesthetic impact for this project as part of the State Environmental Quality Review Act (SEQRA) > Outcome was a more fully tuned site and landscaping plan that incorporated visual mitigation to minimize impact to surrounding residences.

1991 Proposed Deerfield Landfill site evaluation – Project manager for a VIA, wetland assessment and wild life species review was conducted for a proposed land fill site in upstate New York for a local citizens group (CALIS). This contributed toward elimination of the site from consideration as a landfill.

Other Relevant Visual Assessment projects conducted at SUNY/ESF

Primary investigator- *Thruway Entrance and Commercial Strip Redevelopment Study* for Northern Chautauqua Community Council, Fredonia, NY. Also appears in Legal Landscape Book, Chapter 8: Scenic View Protection at http://www.esf.edu/es/via

Primary investigator- *St.Lawrence River Scenic Access Study* for the St. Lawrence-Eastern Ontario Commission, Watertown, NY covered cape Vincent to Hammond, NY. Follow up study covered Massena to Ogdensburg, NY sponsored by New York Power Authority, Albany, NY. The New York Times and the Herald International picked up original study. Also appears in the **Legal Landscape,** Chapter 8: Scenic View Protection at http://www.esf.edu/es/via

Principal Investigator- *Simulating Visual Management Alternatives for the Blue Ridge Parkway Scenic Overlooks* for the National park Service, SE Regional Office, Atlanta. Work included developing landscape classification system for 469 miles of parkway corridor, simulating alternative vegetative management options at overlooks and recommending vegetative management options.

Co-investigator with J. Palmer and others- *Development of Visual Impact Assessment Process (VRAP)* for the US Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Miss. Work included VIA methodology development plus five training courses in Ft. Belvoir, Virginia, Vicksburg, Miss and San Francisco, CA between 1987 and 1989. VRAP manual can be accessed at http://www.esf.edu/es/via

Principal Investigator - Production of *NYS DEC Scenic Roads Program Handbook*. Including research, writing and production of Handbook.

Principal Investigator - *Scenic Road Management Plans for Rhinebeck and Redhook NY* also under contract to NYS DEC. This won a national award from Scenic America as noted before.

Co-Principal Investigator with Donald Appleyard, Burton Litton, Kenneth Craik, Nicholas Feimer and Stephen Sheppard. *Assessing the Validity and Reliability of the BLM Contrast Rating Method*. Three year project at the US Forest Service SW Forest and Range Experiment Station and UC Berkeley from 1977-80.

MAJOR PUBLICATIONS
Book Chapters, Special Journals & Monographs

Smardon, R.C. and J. Karp. 1993. **The Legal Landscape: Guidelines for Regulating Environmental and Aesthetic Quality**. Van Nostrand Rhinehold, 287pp. Now available at http://www.esf.edu/es/via

Smardon, R.C. (ed.) 1992. *Aesthetics and Visual Quality*. In **Environmental research Needs in Transportation**. TRB Transportation Research Circular No. 389, Wash., DC, pp. 36-40.

Smardon, R.C. 1990. *Community Control versus the Elitist Landscape*. In Paul Growth (ed.). **Vision, Culture and Landscape: Working Papers from Berkeley Symposium on Cultural Landscape Interpretation**. Yale University Press, New Haven. pp. 133-156.

Smardon, R.C., T. R. Day, J. F. Palmer, T. Redway and L. Reichardt. 1988. *Historical Overview and Landscape Classification of Vistas and Rural Landscape Along the Blue Ridge Parkway*. In F. Noe (ed.) **Visual Preferences of Travelers Along the Blue Ridge Parkway**. Scientific Monograph Series No. 18, USDI, National Park Service, Wash. D.C., pp. 105-141.

Palmer, J. F., T. Day, R. C. Smardon, T. Redway and L. Reichardt. 1988. *Simulating and Evaluating Management Practices*. In F. Noe (ed.) **Visual Preferences of Travelers Along the Blue Ridge Parkway**. Scientific Monograph Series No. 18, USDI, National Park Service, Wash. D.C., pp. 142-157.

Smardon, R.C., J. F. Palmer and J. P. Felleman (eds.). 1986 **Foundations for Visual Project Analysis.** John Wiley and Sons, New York, NY, 374pp. Now available at http://www.esf.edu/es/via
.
Smardon, R.C. (ed.) 1983. **The Future of Wetlands; Assessing Visual-Cultural Values**. Allanheld-Osmun Press, Totowa, NJ, 226pp.

Smardon, R.C. and J. P. Felleman(eds.). 1982. *Special Issue on Visual Resources Management*. **Coastal Zone Mgmt. Journal** vol. 9, No.3/4, 200pp.

Smardon, R.C., M. Hunter, J. Resue and M. Zoelling. 1982. **Our National Landscape: Annotated Bibliography and Expertise Index**. Special Publication 3279, Agricultural Science Publications. UC Berkeley, CA, 193pp.

Elsner, G. H. and R.C. Smardon (Tech. Coord.) 1979. **Our National Landscape: A Conference on Applied Techniques for Analysis and Management of the Visual Resource** [April 23-25, 1979, Incline Village, Nev.] Gen. Tech. Rpt. PSW-35. US Forest Service Pacific SW For. and Range Exp. Stn., Berkeley, CA. 752pp.

Visual Impact Assessment Handbooks and Training Materials

J. F. Palmer, J. F. Felleman and R.C. Smardon. 2001. **Visual Impact Assessment: Recent Advances in VIA Methods and Techniques**. Multi-sectioned workbook for Public Employees Federation /Public Service Training course in Syracuse, NY January 11, 2001 – 28 participants from several state agencies.

J. F. Palmer, J. P. Felleman and R.C. Smardon. 1997. **Visual Impact Assessment Short Course**. Multi-sectional workbook produced for Public Employees Federation short course December 9-10, Albany, NY, 32 enrollees.

J. F. Palmer, S.R.J. Sheppard and R. C, Smardon. 1989. **Visual Assessment Technology for Transportation Projects: A Short Course for California Department of Transportation Environmental Design Professionals**. Multi-sectional workbook produced for University of California Extension, July 11-13 San Francisco, CA., 50 enrollees

M. Potteiger, J. F. Palmer and R.C. Smardon. Undated. **Visual Assessment Procedures Short Course**. Multi-sectional workbook produced for short course at the University of Southern Maine, Portland, and 35 enrollees.

Smardon, R.C., J. F. Palmer, A. Knopf, K. Grinde, J. E. Henderson and L. D. Peyman-Dove. 1988. **Visual Resources Assessment Procedure for US Army Corps of Engineers**. Instruction Report EI-88-1, Environmental Lab, US Army Waterways Exp. Stn., Vicksburg, Miss. 71pp. plus appendices. Now available on line at http://www.esf.edu/es/via

Smardon, R.C., S.R. J. Sheppard and S. Newman. 1984. **Visual Impact Assessment Manual**. School of Landscape Architecture Occasional paper ESF 84-009, SUNY/ESF, Syracuse, NY. Now available on line at http://www.esf.edu/es/via This manual was produced for USDI Bureau of Land management as part of a three-year project to assess the reliability and validity of BLM's contrast rating VIA method.

Felleman, J.P., R. S. Hawks, R. A. Lambe, J. F. Palmer and R. C. Smardon. 1983. **Aesthetic Resources: Inventory, Analysis and Evaluation**. A multi-section short course reader prepared for US Corps of Engineers short courses in Ft. Belvoir, Vicksburg Mississippi and San Francisco, CA. Various versions used by about 150 trainees aver 3 years.

EXPERT WITNESS TESTIMONY

2007 – Gravel mine visual impact critique and testimony in SEQRA hearings in Milan, NY

2006 – Cobbleskill Stone quarry visual review and testimony in SEQRA Hearings in Schoharie, NY

2003 - Defense of VIA process used for *Besicorp Newsprint Recycling and Co-Generation Facility.* Direct and cross examination testimony for PSC Title 10 hearings in fall of 2003. Subcontract to ENSR by Integrated Site Landscape Architects, PC (ISLA).

2001- Review and Critique of VIA for Bowline 3 Proposed co-generation Plant in Haverstraw, NY. Work included visual inventory of key viewpoints, computer visibility analysis, simulations from river edge viewpoints and direct testimony. Visual plus fisheries impacts resulted in dry cooling recommended by the administrative law judge and the NYSDEC Commissioner.

1998-1999 Critique of visual analysis for *Athens Co-Generation Plant*. Direct and cross-examination testimony for PSC Title 10 hearings in 1998-99 thru ISLA for Scenic Hudson, Inc.

Sour Mountain Quarry VIA and Mine Reclamation critique in Fishkill. NY Project involved VIA redo and critique, direct, and cross-examination testimony for Scenic Hudson thru ISLA 1995-97.

Preparation of literature review for potential litigation involving coastal zone development and wetland impacts for *South Carolina Coastal Commission* in 1990 thru ISLA.

Preparation of direct testimony and conceptual arguments for statewide *review for undergrounding utility lines* in New York State for PSC hearings in 1989 for Scenic Hudson as an independent consultant.

Consultation on potential litigation in *Harper's Ferry, West Virginia*. Case involved analysis of visual impacts of mining activity visible from a national park -prepared for National Park Service, Wash., DC as independent consultant.

Testimony at the St. Lawrence-Eastern Ontario Commission hearing on *visual impact of proposed amusement park structure* in Alexandria Bay in 1988 as an independent consultant.

SEQRA joint hearing testimony and cross examination (Pottsdam, NY) on *visual impact of Iroquois Gas Pipeline* running through New York State. Also designed VIA methodology for the corridor as an independent contractor under contract to Environmental Design and Research, Syracuse.

SEQRA joint hearing testimony and cross-examination (Oswego, NY) on visual impact of proposed new storage facility within the Port of Oswego across from historic Fort Ontario. Project approved but mitigation measures imposed by the St. Lawrence-Eastern Ontario Commission.

Consultant to Environmental Design and Research for SEQRA joint hearing on *visual impact of microwave transmission facility* in Skaneatles, NY.

Deposition testimony and preparation of exhibits on *visual impact of off-road-vehicle use on Cape Cod National Seashore* for Conservation Law Foundation of New England, Boston in 1982-84. In the **Legal Landscape** Book Chapter 15: Litigation and Aesthetic Analysis on the web at http://www.esf.edu/es/via

Testimony and presentation in quasi-judicial hearing on *environmental impact of proposed gravel extraction and reclamation project* in Preble, NY in 1983 under Ecology Compliance Ltd.

Preparation of exhibits and VIA of Corps of Engineers *jetty (Oregon Inlet, Cape Hatteras, North Carolina)* for National Park Service, SE Regional Office (Atlanta) for Secretary of the Interior cross-agency hearing in 1982 through SUNY/ESF contract. Also appears in the **Legal Landscape** book, Chapter 11: Aesthetic Project Review via http://www.esf.edu/es/via
.

Direct and cross examination testimony in Federal District Court on visual and recreational impacts of *I-220 highway viaduct bridge structure* in Cross Lake, Shreveport Louisiana for Louisiana Environmental Society as an independent consultant in 1979. Also appears in the **Legal Landscape** book, Chapter 15: Litigation and Aesthetic Analysis via http://www.esf.edu/es/via

Appendix H

Visual Contrast Rating Summary

Portageville Rail Bridge Visual Impact Assessment

Visual Contrast Rating Summary

Alternative: ***Existing and new bridge***

Viewpoint:		VP 'A'				VP 'B'				VP 'C'				VP 'D'			
Evaluator:		RCS	GWP	MMG	Total	RCS	GWP	MMG	Total	RCS	GWP	MMG	Total	RCS	GWP	MMG	Total
Land/water	*Form*	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**
	Line	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**
	Color	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	2	0	**2**
	Texture	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Vegetation	*Form*	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	1	1	1	**3**
	Line	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**	0	2	1	**3**
	Color	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Texture	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**
Structures	*Form*	2	2	2	**6**	2	2	2	**6**	2	2	3	**7**	3	3	3	**9**
	Line	2	3	2	**7**	2	2	2	**6**	2	3	3	**8**	3	2	2	**7**
	Color	1	1	1	**3**	1	1	1	**3**	1	1	2	**4**	1	1	1	**3**
	Texture	1	2	1	**4**	1	2	2	**5**	1	2	2	**5**	2	2	2	**6**
TOTAL		6	8	6	**20**	6	7	7	**20**	7	9	10	**26**	10	16	10	**36**

Contrast Rating Score:
Strong=3
Moderate=2
Weak=1
None=0

Alternative: ***New bridge only***

Viewpoint:		VP 'A'				VP 'B'				VP 'C'				VP 'D'			
Evaluator:		RCS	GWP	MMG	Total	RCS	GWP	MMG	Total	RCS	GWP	MMG	Total	RCS	GWP	MMG	Total
Land/water	*Form*	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**
	Line	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Color	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**
	Texture	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Vegetation	*Form*	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	1	1	0	**2**
	Line	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Color	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Texture	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**
Structures	*Form*	3	2	2	**7**	1	2	2	**5**	1	1	2	**4**	3	3	2	**8**
	Line	2	2	3	**7**	2	1	1	**4**	2	2	1	**5**	2	2	2	**6**
	Color	1	1	1	**3**	1	2	1	**4**	1	1	1	**3**	1	1	1	**3**
	Texture	1	1	1	**3**	1	1	1	**3**	1	1	2	**4**	1	1	2	**4**
TOTAL		7	6	7	**20**	5	6	5	**16**	5	5	6	**16**	9	10	7	**26**